

SAILING
DIRECTIONS
FOR THE
RIVER OF ST. LAWRENCE,
TO
ACCOMPANY THE CHART.

LONDON:
PUBLISHED BY R. H. LAURIE,
53, FLEET STREET.

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SAILING DIRECTIONS

FOR THE

RIVER OF ST. LAWRENCE

TO

ACCOMPANY THE CHART.



BY ALEXANDER GEORGE FINDLAY,

Fellow of the Royal Geographical Society.

LONDON:

PUBLISHED FOR RICHARD HOLMES LAURIE,
53, FLEET STREET, E.C.

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ADDENDA.

THE FOLLOWING LIGHTS HAVE BEEN ESTABLISHED SINCE THIS
WORK WENT TO PRESS.

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- 45 | **Cape Rouge.**—A fixed light, at 175 ft., visible 10 miles, from a square white tower, 24 ft. high.

MAGNETIC VARIATION OF THE COMPASS.

Magnetic Variation, westerly, in 1872, increasing at the rate of 3' or 4' annually; in the Strait of Belle Isle, 36°; the East end of Anticosti, 28°; Cape de Monts, 24°; at the Saguenay River, 20°; Quebec, 17°; Bathurst in Chaleur Bay, 23°; East point of Prince Edward Island, 24°.

John Mappin
Apr 1 1878
water

THE
GULF AND RIVER OF ST. LAWRENCE.

I.—GENERAL PHENOMENA.—WINDS, WEATHER, CURRENTS,
ICES, ETC.

WINDS.—The prevalent wind in the summer, in all parts of the River and Gulf of St. Lawrence, is from the S.W. Westerly winds are almost always accompanied with fine, dry, sunny weather; easterly winds as frequently the contrary. Steady N.W. winds do not blow frequently before September, except for a few hours at a time, when they generally succeed easterly winds that have died away to a calm, and usually veer round to the S.W. In the spring, easterly winds are the prevailing winds, sometimes blowing for several weeks in succession. Strong winds seldom veer quickly round from one point of the compass to another directly contrary; in general they die away to a calm, and are succeeded by a wind in the opposite direction.

The direction of the winds in the river is generally directly up or down its course, following the direction of the high lands on either shore. Thus a S.E. wind in the Gulf becomes E.S.E. between Anticosti and the South coast; E.N.E. above Point de Monts; and N.E. above Green Island.

FOGS.—The prevalence of fog is one of the greatest sources of danger in the navigation of these parts, and during their prevalence there is no sure guide for the mariner but the constant use of the lead. The fogs prevail when the wind is in the eastern quarter. They sometimes come with westerly winds, but they are rare, and never of long continuance. Winds between South and East bring rain and fog in almost every part; and E.N.E. winds in the river, above Point de Monts, becoming S.E. winds in the gulf, have the same foggy character.

These fogs are probably occasioned by the unequal temperature of the water brought down by the river and that of the gulf, which is colder, from the influx of the northern stream through the Strait of Belle Isle, and between these and the air. The eddy flood mixing with the waters of the river, besides occasioning the dense and low fogs, are also probably the occasion of the phenomenon of Mirage, which sometimes occurs, and which is caused by terrestrial refraction from unequal temperatures in the different strata of the air and water.

CURRENTS.—The current which prevails through the Strait of Belle Isle passes along the North shore of the gulf, at a short distance from it, leaving a space between it and the land, in which the alterations of tide are tolerably regular, when not otherwise affected by the winds. Pursuing this S.W. direction towards Cape Whittle, and gradually losing its force as it advances, it takes the direction given it by the trending of the coast at this part, and meeting with the current which comes from the West, from the river on the North side of Anticosti, and which perhaps is deflected by the projection of the land at Natashquan Point, it gradually takes a S.S.E. course across the gulf, and then meeting with the main current of the St. Lawrence, coming to the South of Anticosti, between it and the Magdalen Islands, the whole of the waters take a S.E. course, through the principal entrance of the gulf, between Cape Ray on Newfoundland and the Island of St. Paul.

These currents are modified by various causes, and their strength and direction are difficult to estimate, although it is of great importance that a proper allowance should be made for them, as, from their *southern* tendency many vessels are lost, from want of due precaution, on the coasts of Gaspé and its neighbourhood, on the Magdalen Islands, &c. "This current," says Captain Bayfield, "is checked by easterly winds,

G. & R. of St. Lawrence.

and may sometimes run in a contrary direction from the same cause." Northerly winds may also cause it to set to the southward towards Breton Island.

The flood-tide entering the River St. Lawrence, proceeds upwards in the wide and deep channel of the estuary, till it is obstructed by the contracted breadth of the river near Red Island, and the sudden shallowing of it near this part; from this cause it is prevented from continuing in its upward course, and in consequence of the quantity of water here collected not finding a sufficient outlet, it is *reverted*, and forms an *eddy-flood*. The stream of flood, therefore, runs in opposite directions, on either side of the river. This stream coming from the eastward, as it approaches the northern part of Red Island Bank, runs very strong, sometimes at a rate of 4 knots, bearing round at this part, and proceeding in a different direction towards the Razade Islands, with a velocity of from 2 to 3 miles per hour, and then proceeds onward with a constant current downwards, thus adding to the current of water from the river itself, and increasing its strength. It is strongest in-shore, and extends about half-way over, diminishing in strength towards the middle; and from this difference in its velocity, and the unequal depth of the river, occasioning those violent whirls and ripples which occur in its strongest parts.

On the South coasts of that part of the river between Cape Gaspé and Green Island, there is no upward current from the tides that is available for navigation: during the floods at spring tides, there is a westerly current felt close in-shore, the line between the two streams being marked by strong rippling.

Off Point de Monts there is very little or no stream of flood, excepting close in-shore, and the downward current is constant off that point. The point diverts the current to the S.S.E. which runs at a rate of from one to two miles an hour, so that it is difficult for a vessel to beat round it with a westerly wind.

During the ebb tide, the stream runs down on both sides, strongest on the South, and weakest in the middle of the estuary. On the North shore it is turned to the southward by the projecting points at the Bay de Mille Vaches, Port Bersimis, the Peninsula of Manicougan, and Point de Monts; this fact is important, and ought to be attended to, as this southern tendency is increased at these points, by the water brought down by the large rivers between them.

On the South side the stream of the ebb tide is also increased, by the efflux of water from the Saguenay River, which, setting with great velocity across the tail of the Red Island Bank, adds to the downward course of the stream. The tides in the river above this part are described hereafter.

ICES.—On the approach of winter the navigation of the gulf is greatly impeded by floating ices, and the river is at length choked with broken fields of ice, exhibiting the most varied and fantastic appearances; the whole country on each side is then covered with snow, and all the trees, excepting the stern fir-tribes, are denuded of their foliage.

In crossing the gulf, even during the summer months, islands of ice have frequently been met with. The ice that drifts out of the rivers all disappears by the latter end of May, but these masses make no part of it. The conjecture is, that they are not formed on any of the neighbouring coasts, but descend from the more northerly regions of Davis's Strait, &c., where, it is presumed, they are severed by the violence of storms, from the vast accumulations of the arctic winter; and passing near the coast of Labrador, are drawn by the in-draught of the current into the Strait of Belle Isle. They often are a hundred feet in height, with a circumference of many thousands; the indications of their presence in the night, or during fogs, have been described on page 8. By day, from the dazzling reflection of the sun's rays, also by moonlight, at a safe distance, their appearance is brilliant and agreeable.

"In the fall of the year accidents from ice seldom happen, except when the winter commences unusually early, or when vessels have lingered imprudently late, from the temptation of obtaining high freights.

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II.—THE ISLAND OF ST. PAUL, MAGDALEN ISLES, AND ANTICOSTI.

THE ISLAND OF ST. PAUL lies N. 57° E. true, 12½ miles from Cape North, on Breton Island. The northern extremity of the island is in lat. 47° 14' N., and long. 60° 8' 17" W. It is nearly 3 miles long, and one mile broad. The margin is rocky and precipitous almost all round, indented by coves, in which ships may obtain shelter during the prevalence of certain winds.

LIGHTS.—On St. Paul's Island are two lighthouses, one near the northern, the other near the southern extremity; of which one will always be open, unless to a vessel near the central rocks. The northern light, *brilliant and fixed*, is about 140 ft. above the level of the sea; it can be seen to the southward on any bearing between N. by E. and E. by N. (by compass), when it is obscured by the hill to the southward of it. The southern light may be seen from the northward on any bearing except between S.S.E. and West, when it is obscured by the hills to the northward of it. These lights are visible at a distance, from each tower, of 6 leagues.

In *Trinity Cove*, at the North point of it, is a provision post. This cove is a mile from the South point on the West side; on the opposite side of the island is *Atlantic Cove*, and a landing may be effected in either of these. The cove on the N.W. affords a small and bold beach, about 150 feet long, where a landing may be effected, but generally with difficulty, by reason of the continual swell of the sea. The interior of the island rises into three hills, the highest being nearly in the centre, and terminating in a square summit of about 50 feet on each side, and nearly perpendicular, which is estimated to be about 500 feet above the level of the sea. The surface of the island is, in general, rocky, with some spots of marsh or bog, which probably supply the fresh water found issuing from the rock. Stunted fir and white birch trees are the only products of the isle, but some drift wood may be picked up.

There is anchorage all round the island, and close in-shore, which circumstance enables vessels to lie there with any winds, by shifting their stations as the wind and weather require—a mode practised by the privateers of the United States during the last war. There are tolerably regular soundings off the North side, at the distance of half or three-quarters of a mile; on the N.E. side a bank lies off about three-quarters of a mile, with from 7 to 8 fathoms of water. The general depth of the soundings around the island, at half a mile from the shore is from 20 to 40, but the water soon deepens to 100, fathoms. There is a plentiful fishery of cod and mackerel around the coast, and also an abundance of seals.

This island has been noted for the great number of wrecks which have been found on its shores, arising from the frequent fogs and tempestuous weather, the uncertain currents, and abrupt nature of its coast, &c.; which, it is hoped, will be obviated by the two lighthouses, established in 1840.

MAGDALEN ISLANDS.—The Magdalen Islands, within the entrance of the Gulf of St. Lawrence, is a group of irregular isles, between the parallels of 47° 13' and 48° 37' North. They are named respectively *Entry Island*, *Amherst*, *Grindstone*, *Albright*, *Wolfe*, *Grosse*, and *Coffin Islands*; exclusive of *Byron* or *Cross Island*, and the *Bird Islets*, which lie more to the North. These isles, although so near to the coast of Newfoundland, are included in the government of Canada, being annexed to the district and county of Gaspé. They contain (1860) a population of 1,100 souls, chiefly French Acadians and Catholics. A few English and Irish families are settled among them, all of whom derive their principal subsistence from the fisheries. Beyond the cultivation of potato gardens, agriculture seems wholly unknown on the islands; but natural meadows and pasturing grounds are common, and afford wholesome sustenance to a tolerable proportion of live stock. The highest range of Fahrenheit's thermometer has been marked 76°.

Small supplies of fresh provisions may be got at Entry Island, and water from

Amherst Harbour. Wood is scarce, and spars, except such as are saved from wrecks, not to be had.

There is no harbour for ships, and but three for small vessels, those at Amherst, House, and Grand Entry Harbours.

It often happens, from the prevalence of westerly gales in the fall of the year, that ships bound to Quebec, after entering the gulf, have been driven out again, or they have contended until their crews were worn out, and have gone to the low ports for cargoes, when, by taking an anchorage, they would have secured their passage. These islands may be approached, generally, by the lead, to 7 fathoms of water.

Amherst is the most southern and principal island, connected with Grindstone Island by a double line of sand-bars, enclosing an extensive lagoon, five or six miles long, and from one to three wide, the southern part of which is called *Basque Harbour*. It has three outlets into Pleasant Bay; the southernmost is the deepest, but has only 3 feet at low water. *Pleasant Bay*, to the East of this, and N.E. of the island, deserves the name. It is the best harbour in the Magdalens, and the only one that vessels can venture to ride in with all winds. The best anchorage is in 4 fathoms, the rocky point of the entrance of Amherst Harbour bearing S.W. $\frac{1}{2}$ W. two-thirds of a mile. *Amherst Harbour* is in the S.W. corner of Pleasant Bay; its entrance is very narrow and crooked, and over the bar is 7 feet least water.

The *Demoiselle*, a remarkable hill of Amherst Island, on the South side of Pleasant Bay, is about 280 feet high above the sea.

Pleasant Bay is the best roadstead in the Magdalen Islands, and the only one where vessels can venture to lie with all winds, during the three finest months of summer, June, July, and August. In those months, a gale of wind from the eastward, so heavy as to endanger a vessel with good anchors and cables, does not occur above once in three or four years. The riding, however, is often heavy and rough enough in N.E. gales, and a vessel should be well moored with a whole cable on each anchor, and open hawse to seaward, and all snug aloft.

The best and most sheltered anchorage is in 4 fathoms, with the rocky point of entrance of Amherst Harbour bearing S.W. $\frac{3}{4}$ W., two-thirds of a mile, and a little more than half a mile from high water mark on the sandy beach to the southward, when a remarkable and high sand hill will bear S. $\frac{1}{2}$ E. A vessel of large draught should anchor farther off, and should take notice that there is only from 3 to 3 $\frac{1}{2}$ fathoms in one part of the bay. The bottom is everywhere excellent for holding, and of red sandy clay. Nevertheless, the attempt to ride out a heavy easterly gale, either before June, or after August, will be attended with great danger; and Pleasant Bay cannot be recommended as a desirable place under such circumstances at any time of the year.

Fine weather, even in June, is not generally of long continuance; and dark cloudy weather is commonly indicated by a heavy swell rolling in from the eastward. Winds are frequently strong from W.N.W., but S.W. are the prevalent winds during the summer months.

To the West an islet or rock, called *Deadman Islet*, stands alone in the sea, at 7 $\frac{1}{4}$ miles N.W. by W. from the western point of Amherst Island, and is extremely remarkable. In shape it is an irregular prism, and about 3 cable's lengths long by one wide. When seen broadside it resembles a body laid out for burial, hence its name. Seen end on, it looks like a pyramid, and about 170 feet high above the sea. It appears to be quite inaccessible, and sharp at the top. The waves foam around its base, and dash their white spray far up its sides, beautifully contrasting with the remarkable colours of the rock, which appears of a dark reddish brown at each end, and bluish green in the centre, the colours passing into each other. A reef extends from it, for one-third of a mile, toward Amherst Island.

The *White Horse*, a very dangerous reef, lies N. 60° E. true 7 miles from *Deadman Islet*, and W.N.W. 5 $\frac{1}{2}$ miles from Gull Island, on the coast of Grindstone Island. It is small, and has 10 feet water over pointed rocks, on which the sea often breaks.

The *Pierre de Gros Cap* is another dangerous reef, on the West of Grindstone Island, it has 18 feet least water, and lies N.E. by E. $\frac{1}{2}$ E. 6 miles from the White Horse; N.W. $\frac{1}{2}$ W. from Hospital Cape, and $2\frac{1}{2}$ miles from Cape la Trou, the nearest point of Grindstone Island.

Entry Island is the highest of the Magdalens, and 580 feet high above the sea. It may be seen, in clear weather, from 8 to 9 leagues off. The eastern side is bold close-to. There are high and magnificent cliffs of trap, porphyry, new red sandstone, and red marl around it, excepting the N.W. point, which has a long sandy spit off it; on the North point is the remarkable Tower Rock. The cliffs of Amherst island are also red of different shades; these contrasted with the green pasture of the hill sides the darker green of the spruce trees, and the bright yellow of the sand-bars and beaches produce an effect extremely imposing in a brilliant sunny day, which sometimes occurs. The Andromache Rocks extend $1\frac{1}{2}$ cables from the High Rock, and there is a $3\frac{1}{2}$ fathoms patch one-third of a mile off the N.E. point.

The *Pearl Reef* lies E. by N. $4\frac{1}{2}$ miles from the N.E. point of Entry Island, and S.E. $\frac{1}{2}$ S. $8\frac{1}{2}$ miles from Cape Alright; it is small and dangerous, having 9 feet least water.

Grindstone Island, to the North of Amherst Island, is the second in size of the group: it is 550 ft. high; and to the N.E. of this is Alright Island. Its S. point is Cape Alright, which is remarkable; the cliffs of a greyish white colour, with occasional brick-red low down, are 400 feet high. The S. extremity of the cape is low, with a small rock close off it. *Alright Reef* lies E. by S. $3\frac{1}{2}$ miles from Cape Alright; there is 6 feet water over it.

From Grindstone Island the West coast is a continuance of sand-beaches and sand-hills, for 9 to 10 miles, to *Wolfe Island*, which is of low sand-stone cliffs, three-quarters of a mile long; after which the sand-beaches recommence, and continue with high sand-hills occasionally 9 or 10 miles further to the North Cape, or Grosse Island, a precipice of considerable height. Off this are the *North-Cape Rocks*, 600 fathoms off shore.

The *East Point* of the Magdalens is of low sand, with several sand-hills, which extend W. to the *N.E. Cape*. Off the East point is the *Long Spit*, a ridge of sand, with from 2 to 3 fathoms of water, extending $1\frac{1}{2}$ mile S.E. $\frac{1}{2}$ S. from the point: and for $1\frac{1}{2}$ mile further the depth is from 4 to 6 fathoms. To clear this spit in 5 or 6 fathoms, take care not to bring Old Harry Head to bear to the southward of West. It is extremely dangerous, and there is a heavy breaking sea on it.

Doyle Reef lies S.E. $\frac{1}{2}$ E. $6\frac{1}{2}$ miles from the East Point. The least water on it is 3 fathoms on one spot, and 12 to 13 fathoms all round it. It seldom shows, but is one of the worst dangers of the Magdalens. The only mark to clear it is the North Cape of the Magdalens, open two-thirds of its breadth to the N.E. of the North-East Cape, which is a remarkable hill, 230 feet high, on *East Island*, which stands at the head of Grand Entry Harbour, and can be seen over all the sand-hills.

S.W. of East Point is *Coffin Island*, the N.E. point of which is Old Harry Head, lying W.S.W. $4\frac{1}{2}$ miles from it. From this head $2\frac{1}{2}$ miles S.S.W. $\frac{1}{2}$ W. lies the outermost of the *Columbine Shoals*, a patch of rocks with 3 fathoms water. Between this and Coffin Island are numerous small shoal patches, some of which have not more than 3 feet water. This is a dangerous part, and should not be approached at night, or during fogs.

At the S.W. end of Coffin Island is the entrance of *Grand Entry Harbour*, which is extremely narrow, and ought not to be attempted without a pilot. The depth in this entrance is not more than 10 feet least water, and the harbour itself is extensive and well sheltered.

Bryon, or Cross Island, is uninhabited. Its East end bears from the East Point of the Magdalen, N. by E. $\frac{1}{2}$ E. 10 miles. The North side has steep cliffs of red sandstone. Approach no nearer than in 8 fathoms. Reefs extend three-quarters of a mile to the N.E. off its East end; another off the West end extends $1\frac{1}{2}$ mile to the

G. & R. of St. Lawrence.

West; and off the sandy S.W. point, a third extends $1\frac{1}{2}$ mile to the southward. On the South side there is good shelter, with North and West winds, in 6 fathoms, sandy bottom, the East end of the island bearing E. by S., and the reef to the westward bearing West. In this road is a strong underset, which makes a ship at her anchors roll heavily.

The **BIRD ISLETS, or Rocks**, are small, and not far asunder: in the passage between them is a rocky ledge. They are of moderate height, flat and white at top. One appears like a high lump, and abounds with gannets. The southernmost is the largest; from the East end extends a small ledge of rocks. Between these islands and Bryon Isle is a rocky ledge, with a depth of from 4 to 7 fathoms. It is generally recommended to pass to the eastward of the Bird Islets, unless a special advantage may be gained by passing between them and Bryon. In sailing from these islands, toward Cape Rosier, you will have a depth of from 30 to 60 fathoms, to the distance of 18 leagues from the islands, and then lose soundings until you approach the cape.

LIGHT.—A lighthouse has been erected on the Great Bird Rock. It exhibits a *fixed white light*, 140 feet above the level of the sea, and visible 21 miles off. Lat. $47^{\circ} 50' 40''$ N., long. $61^{\circ} 8' 20''$ W.



The Bird Islets, S.S.W. $\frac{1}{2}$ W. 4 miles.

THE ISLAND OF ANTICOSTI.—This island is 41 leagues in length, between the meridians of $61^{\circ} 40'$ and $64^{\circ} 33'$; and, with one exception, has no bay nor harbour capable of affording shelter to shipping. There is not a single detached danger off any part of its coasts. It is generally, but nowhere exceeding 700 feet high, and may be seen, in clear weather, at 8 or 9 leagues; but the haze is so great, in the summer season, that it can seldom be distinguished at more than 5 leagues. The island is uncultivated, and covered with immense forests, to which Indians repair, from the neighbouring continent, for the purpose of shooting bears. The only permanent inhabitants are those in charge of the three lighthouses and the provision posts at Ellis Bay and Shallop Creek, and one man at Fox Bay.

The powerful stream setting constantly from the River of St. Lawrence, and the heavy snow-storms in the fall of the year, have unquestionably been the cause of many shipwrecks on Anticosti. But, in order to relieve such as may be cast ashore here, government agents have been appointed to reside at the two stations all the year, who are furnished with provisions for the use of those who have the misfortune to need them. Boards are placed in different parts, describing the distance and direction to these friendly spots. These establishments were made in the year 1809, because the crews of vessels driven on shore here have, sometimes, at the utmost peril of their lives, forsaken them to make their escape to Gaspé.—*Bouchett's Canada*, 1815.

"One of these provision posts is at 2 leagues to the S.E. from the West end of the island, in *Ellis Cove*, or *Grand Bay*; the other is in *Shallop Creek* (or *Jupiter River*, as it is sometimes called), 3 leagues to the W.N.W. from the South point of the island, and at the lighthouse."

Early in 1829, a shipwreck was discovered to have taken place on the South shore of the island: and it was then found that the establishment for saving lives, &c., had been abandoned, in consequence of which it appeared that 16 or 18 persons had perished from hunger on the island, and no one was left to tell the melancholy tale. Circumstances, however, afforded sufficient evidence to prove that the sufferers were the crew and passengers of the ship *Granicus*, which sailed from Quebec on the 29th of October, 1828. The lives of these unfortunate persons would, in all proba-

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bility, have been preserved, had not the house which they succeeded in reaching been abandoned and destitute of provisions. The same thing occurred to the crew of the *Odessa* in December, 1854. It should therefore be borne in mind that there is now no provision post here. These particulars are given as a caution.

A complete list of the wrecks which have occurred on Anticosti would be a melancholy document; but the instances already given are sufficient to show with how much caution the island should be approached. In thick and foggy weather, the barque *Flora* was stranded here, and lost on the 22nd of August, 1832, at about 15 miles from the lighthouse, when the latter could not be seen.

East Cape is in lat. $49^{\circ} 8' 17''$, long. $61^{\circ} 39' 59''$. It is a perpendicular cliff, 100 ft. high. To the southward of it is *Wreck Bay*, which is dangerous, and affords no shelter.

EAST POINT LIGHTHOUSE.—At the extremity of the low land to the southward of *Wreck Bay* is *Heath Point*, on which stands a limestone tower 90 feet high; as the point itself is not more than 10 feet above the sea, at a little distance it appears like a sail, and is useful in marking the extent of the low land to vessels either to the East or West of North. The light is brilliant and fixed, 110 feet above high water, and visible at 15 miles off.

Between *Fox Bay* to the North and East Cape the coast is bold and clear; there is anchorage in westerly winds between *Cape Sand Top* and East Cape, at the distance of a mile from the shore. *Reef Point* is the South point of *Fox Bay*, and from it runs a dangerous reef for $1\frac{1}{2}$ mile, with only a few feet of water, and 10 fathoms close to the end of it. A house is at the N.W. side of the head of the bay, and was the scene of the sufferings of the crew of the *Granicus* mentioned above.

Table Head is remarkable by the hill, from which it derives its name; and from hence to *Cape Robert*, 19 miles north-westward, the coast is broken into small bays, which afford no anchorage.

From *Cape Robert* to *Bear Head*, on which is a white beacon 30 ft. high, the bearing and distance are N.N.W. 6 miles. Between them is *Bear Bay*, which is the best anchorage on the North of Anticosti, and this is in 13 fathoms of water; *Cape Robert* bearing S.E. $\frac{1}{4}$ S., and *Bear Head* N. by W. $\frac{1}{4}$ W.

From *Bear Head* to *Cape Observation*, a bold, high, and remarkable headland, is $12\frac{1}{2}$ miles north-westward; the coast between them is bold, with high greyish white cliffs, and small bays between.

Eleven miles north-westward from *Cape Observation* is *Carleton Point*, under which vessels may anchor in fine weather, and can procure wood and water. Farther on is *West Cliff*, which appears like a white patch on the land, and can be seen at a distance of 6 or 7 leagues. It is now also marked by a beacon. From *Carleton Point* to within 4 miles of *West Cliff* there are low cliffs. From *West Cliff* to *High Cliff* is 26 miles; between them the coast is low in front, with high ridges a short distance in the country. This part of the coast is very dangerous, as the reefs extend for two miles outward, commencing at *West Cliff*, where they are half a mile broad, widening to about 12 miles from *High Cliff*, and terminating about 7 miles East of it. *High Cliff Cape* is easily recognised, as it is the only cliff on the North coast to which the sea does not come quite up to the base.

From *High Cliff* to *North Cape* is 13 miles; it is wooded, of very moderate height, and without any cliff. It is distinguished by a beacon. The coast here trends round to *West Point*, between which are flat reefs, extending a mile off shore. It is in lat. $49^{\circ} 52' 20''$, long. $64^{\circ} 32' 8''$.

WEST POINT LIGHTHOUSE is a white tower, 109 feet high, and shows a bright fixed light at 112 feet above high water, visible from a distance of 15 miles.

Between *West Point* and *Cape Henry* the reefs extend a mile and a quarter off shore, and ought to be approached with caution.

Ellis Bay is the only good anchorage in the Island of Anticosti. It runs inland between *Cape Henry* and *Cape Eagle*. Off these two capes run flat limestone reefs; that from *Cape Henry* is nearly a mile out to the South, and the other extends three

quarters of a mile West of Cape Eagle. The entrance between them is 600 fathoms wide, between the depths of 3 fathoms.

In approaching the bay with westerly winds, run down the reefs off Cape Henry in 10 fathoms, until the West side of the *White Cliff*, on the East side of the bay, is on with the East side of the westernmost of two hills at a distance, which lie near the North coast, between the North and West points; then haul up with these marks on, which will lead into smooth water, close under Cape Henry Reef, in $3\frac{1}{2}$ fathoms, until Mr. Gamache's House bears N. by E., and then bear up for it, and anchor in 3 fathoms, muddy bottom, about half a mile from the flats at the head of the bay, and 300 fathoms from those on either side.

Becscie River is a very small stream at the head of a small cove, affording shelter for boats, and is 12 miles S.E. from Ellis Cove; and 7 miles further, in the same direction, are *St. Mary's Cliffs*, which are 21 miles from South-West Point, a wooden beacon, in the form of a cross, stands on the cliffs. *Observation River* is $5\frac{1}{2}$ miles northward of this point, and is the largest stream on the island: on the North of this river are some conspicuous sandy cliffs. Between South-West Point and Ellis Cove there is no anchorage, and off the shore there are reefs of flat limestone, extending fully a mile, and often 10 or 12 fathoms water close to them.

South-West Point and Lighthouse.—The point is a low projecting mound of limestone, having a small cove on its North side, which forms it into a peninsula; on the western extremity of the point stands the lighthouse, a conical tower, 75 feet high, and the lantern elevated 100 feet above the sea. It shows a brilliant light, which *revolves* once in a minute, and is lighted every year from the 1st of April to the last day in December. To the lighthouse is attached a provision-post, which forms a very conspicuous landmark.

Salt Lake Bay has fine sandy beaches, enclosing lagoons, into which the tide flows. It is 11 miles south-eastward of the S.W. point, and off it, in the centre of the bay, with its N.W. point bearing N.E. $\frac{1}{2}$ E. $1\frac{1}{2}$ mile distant, there is very indifferent anchorage in 7 fathoms. At 6 miles East of Salt Lake Bay stands a beacon, with a lozenge head with cross beneath. Thirty-two miles from South-West Point is Pavilion River; a beacon, with a lozenge and cross above is placed here. In this distance the coast is the boldest on the South of the island, and should be approached with caution. When far enough to the westward to see the *revolving* light of S.W. point, care should be taken not to bring it to bear in the least to the westward of N.N.W.

Shallop Creek lies 13 miles N.W. of the South Point, and the houses of the provision-post are here: between this and the South point the coast is very low, and may be approached safely by using the lead.

South Point is a cliff of sandy clay, about 60 feet high; a reef extends South of it for nearly $1\frac{1}{2}$ mile. The tower on Heath Point and Cormorant Point bearing E. by S. in one clears this. A beacon with a lozenge-shaped head on a mast 40 feet high is placed on the cape.

The coast between South Point and S.W. Point is much the same in character all along. The principal distinguishing marks are the houses of Mr. Hamelle in charge of the provision-post at Shallop Creek, and the beacons at Pavilion River, and South Point.

Cormorant Point bears E.N.E. $16\frac{1}{2}$ miles from South Point, and W. by N. 6 miles from Heath Point. Off Heath Point there is one of the best open anchorages on the island. The best berth is in 10 fathoms, sand and mud, with the light tower bearing E. by N., and Cormorant Point nothing to the West of W.N.W. The vessel will then be 2 miles off shore, and sheltered from all winds between W.N.W. to E. by N., round by North.

At Anticosti the tide flows, on the full and change, at $1^h 43^m$: it runs tide and quarter. Springs rise 10, and neaps 4 feet.

III.—THE NORTHERN SHORE OF THE GULF, FROM FORTEAU POINT TO CAPE WHITTLE.

The coast of Labrador, which is described in this section, is exceedingly dangerous, and, till the recent surveys, was very imperfectly known; there are, however, several good harbours which can be entered by large vessels, and which are used by the fishers that frequent this coast.

The whole of the land consists of granitic rocks, without trees, except in the heads of the bays, where small spruce and birch trees are sometimes found. It is broken into numberless islets and bays, and fringed with islets and rocks, forming in some parts so intricate a labyrinth, that no ships of any size can find their way. The dangers of the coast are much increased by the fogs which accompany the prevalent southerly winds.

There are very few permanent inhabitants, but the coast is much frequented during the season by cod, seal, and salmon fishers. Cod is abundant, especially to the East of Mistanoque, and several vessels also visit the coast to procure the eggs of the sea-fowl, which are taken principally to Halifax. The permanent fur-trading and seal and salmon fishing establishments are at Bradore, Esquimaux Bay, St. Augustine Harbour, Little Fish Harbour, and Etamamu; there are but few other inhabitants than at these places.

The coasts of the Strait of Belle Isle, &c., to Forteau Point, at its western entrance, were described on pages 85—91. We here resume the description, proceeding westward.

POINT AMOUR LIGHT, brilliant and fixed at 155 feet above high water, has been described on page 91. Forteau Bay is 4 miles wide, Forteau Point forming its western point.

Four miles W.N.W. from Forteau Point is *St. Clair Bay*. There are a reef and a low islet off its eastern point, to the S.W. This bay affords no shelter.

Blanc Sablon Bay.—Three miles West from St. Clair Bay is Blanc Sablon Bay. It is exposed to westerly winds, but is sheltered by Wood Island and Greenly Island to the S.W. It is an unsafe anchorage, particularly in the fall of the year, and during winds from the West, which send into it a very heavy sea. It is a mile deep, and $1\frac{1}{2}$ mile wide, and on a projecting point at the head of the bay are the buildings of the fishing establishment of the bay.

Wood Island lies off Blanc Sablon Bay; it is low and barren, and about $1\frac{1}{2}$ mile long, and has some fishing establishments on its East side.

Greenly Island lies $1\frac{1}{2}$ mile West of Wood Island, and between them is a clear channel; and off the South point of Greenly Island, at the distance of about 200 fathoms, is a rocky shoal. On its East side is a cove sometimes used by the fishers, but this anchorage, as well as that under Wood Island, is not good.

One mile and a half westward of Blanc Sablon Bay is *Gulch Cove*, a small inlet of the main; there are some rocks off its mouth which shelter it. It is so narrow, that there is not room for the smallest schooner to run about in it; hence the vessels which frequent it are warped out stern foremost. From Blanc Sablon Bay to *Grand Point* is $2\frac{1}{2}$ miles. Off it is a dangerous reef of rocks, 350 fathoms to the South and West; and eastward of it, for $1\frac{1}{2}$ mile, there are rocks above and under water, extending off the shore for a quarter of a mile in some places.

From Greenly Island to Southmakers Ledge the course is W. $\frac{1}{4}$ N. (*S.W. by W.*), and the distance 128 miles; but the course between them on this bearing is not safe, as it will take a vessel too near the Murr Rocks, and would pass just within the St. Mary Rocks. The best course would be W. by S. 128 miles, until past the Southmakers Ledge.

Perroquet Island lies N. by W. $\frac{1}{4}$ W. $1\frac{1}{2}$ mile from Grand Point. It is high, and is frequented by vast flocks of puffins. It is nearly half a mile from the land, but there is no channel between.

One mile and a half in the same direction from Grand Point, is the edge of the

shoals on the South of *Ledges Island*. Opposite to the centre of this island, on the main, to the East, is an establishment which is about $1\frac{1}{2}$ mile N.N.E. from the West side of *Perroquet Island*.

BRADORE HARBOUR is on the N.E. side of *Ledges Island*; the passage to it is from the South, between a chain of islands off the island, which are quite bold-to, forming the western side of the channel, and the coast of the main, on which is the before mentioned establishment, the eastern side. There is no passage to this harbour to the North or West of *Ledges Island*, as the space is crowded with rocks and dangers, although there is a narrow and very deep channel for small vessels close on the island. To enter *Bradore Harbour*, coming from the East, give *Grand Point* a berth of half a mile, to avoid the reefs lying off it, or taking care that the West extreme of *Perroquet Island* does not bear to the West of North. *Perroquet Island* may be passed as near as a quarter of a mile; having passed this, haul towards the entrance till the West extreme of *Greenly Island* is half a point open of the West extreme of *Perroquet Island*, or bearing S. $\frac{1}{2}$ W., which will clear the *Gull Rock and Ledge*, which bear S.W. by W., and are distant 280 and 490 fathoms respectively from *Point Jones*, on which the houses stand. The rock just covers at high water, and therefore can always be seen; and the ledge has 2 fathoms least water, and therefore is extremely dangerous. On the West side of this ledge the West ends of *Perroquet* and *Greenly Islands* are in one, and they may therefore be avoided by the course above mentioned. Proceed on this course N. $\frac{1}{2}$ E., till *Jones's house* bear E.N.E. and the northern islet on the East appears like the North extreme of *Ledges Island*, N.E. by N.; then steer for the latter, leaving the *Gull Rock* to the East, and looking out for a small rock lying off an island on the opposite side, after passing which the channel is clear, keeping nearer the islets than the main. A run of about 700 fathoms from the houses will bring you opposite the entrance of the harbour, when you must haul sharp round to the westward, between the islets into the harbour. This entrance is 80 fathoms wide and 8 fathoms deep. The harbour is perfectly land-locked, but will accommodate but a small number of vessels,—the depth being from 4 to 17 fathoms, muddy bottom.

In approaching *Bradore Harbour* from the West beware of the reefs, which extend three-quarters of a mile to the S.W. of *Ledges Island*.

At the back of *Bradore Bay*, 4 or 5 miles from the N.E. end of it, are the *Bradore Hills*, the highest land on this coast, that to the N.W. being 1264 feet above the sea.

BRADORE BAY is $5\frac{1}{2}$ miles wide from the South of *Ledges Island* to *Point Belles Amours*, bearing N.W. $\frac{3}{4}$ W. (*West*) from it. This bay is very dangerous, from the heavy sea sent into it by southerly winds, but on its western side is a beautiful little harbour, *Belles Amours Harbour*, in which a great number of vessels can lie perfectly land-locked. Water can be procured here, but firewood is very scarce on this coast.

Belles Amours Harbour.—The channels to this harbour are formed by *Point Belles Amours* on the south-west. It is a mound of bare granite, 60 or 70 feet high,—*Stony Point*, low and green, bearing E.N.E. $\frac{1}{2}$ E., $1\frac{1}{2}$ mile distant from it; and the *Flat Rocks*, lying $1\frac{1}{2}$ mile S. by E. from *Stony Point*, and $1\frac{1}{2}$ mile E.S.E. $\frac{1}{2}$ E. from *Point Belles Amours*. These form the East and West passages to the harbour.

To enter it form the East, steer N. by W. $\frac{1}{2}$ W., leaving the *Flat Rocks* * a quarter of a mile to the West, until you approach the East side of *Harbour Point*, a bare granite hill, 150 feet high, with several beacons of stone on it, within 100 fathoms, taking care not to approach *Stony Point* within a cable's length; then steer North till you are abreast of the rock above water off the sandy part of the point; then

* H.M.S. *Niobe* saw, in 1869, a dangerous shoal of 11 feet water, about 400 yards to the westward of the *Flat Rocks*, on the eastern side of the East passage.

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bear a little to the westward, so as to bring the East side of Harbour Point and Pond Point in one; Pond Point is nearly opposite Stony Point. Keep them in one to clear the North extreme of the Flat, until *Mark Point*, the extreme on the North side of the harbour, comes on with *Peak Point*, a remarkable rocky point in Middle Bay, bearing W. $\frac{1}{2}$ S. When this mark comes on, haul sharp round to the westward, keeping at less than a cable's length from the high North shore, until you are well within the sandy spit, when you may anchor anywhere to the southward, in from 5 to 7 fathoms, muddy bottom.

Between Point Belles Amours and the Flat Rocks there is a rocky patch of 13 feet water. There are other patches of $3\frac{1}{2}$ fathoms between this and the point. To enter the harbour by this western passage, which is preferable in westerly winds, take care not to shut in Stony Point, behind Point Belles Amours, for fear of the Middle Ledges, which lie off Middle Point, the outermost 600 fathoms off shore. Pass Point Belles Amours at the distance of 200 fathoms, and keep at that distance from the shore till past Pond Point; then bear away to Harbour Point, and proceed as before directed.

Middle Point lies $1\frac{1}{2}$ mile W. $\frac{1}{2}$ N. from Point Belles Amours, and $1\frac{1}{2}$ mile E.S.E. from *Five Leagues Point*; between which and Middle Point is *Middle Bay*, a fine open roadstead, free from all danger. It runs N.N.E. for 2 miles, and is above a mile wide; the depth is between 4 and 13 fathoms, sandy bottom.

Five Leagues Point is the S.W. extremity of a peninsula, which is remarkable from an isolated and precipitous hill, 200 feet high, three-quarters of a mile N.E. from its extremity; and from the point the two *Barrier Reefs* extend $1\frac{1}{2}$ mile to the westward, but are not joined to it. There is also a reef, partly uncovered, running for a quarter of a mile to the S.W. of the point. These are cleared by keeping the South extremes of Ledge and Belles Amours Points in one, bearing E. $\frac{1}{2}$ S.

Five Leagues Harbour is to the West of the point of the same name, but is quite unfit for any vessel of moderate size. *Salmon Islet* lies W. by N. $4\frac{1}{2}$ miles from *Five Leagues Point*; it is nearly joined by a spit of sand to *Caribou Island*, off which the shoals extend nearly 400 fathoms to the S.E. Between this island and the main, to the East of it, is the eastern entrance to *Salmon Bay*, which has but 6 feet depth at low water; the other entrance to the bay is from Bonne Esperance round to the North of Caribou Island, in which is plenty of water, and is well sheltered.

BONNE ESPERANCE HARBOUR is the best harbour on the coast, and lies on the West of Caribou Island. *Whale Island* lies N.W. by W. $\frac{1}{2}$ W. (W. $\frac{1}{2}$ S.) $18\frac{1}{2}$ miles from Greenly Island, at the entrance of the Strait of Belle Isle, and all vessels bound to Bonne Esperance endeavour to make this island, which is the south-easternmost of the Esquimaux Islands. It has a roundish hill near its centre, on which is a pile of stones, as there is also on almost every summit of these islands. *Whale Island* bears W. by S. $\frac{1}{2}$ S. (S.W. $\frac{1}{2}$ S.) $4\frac{1}{2}$ miles from *Salmon Islet* before mentioned. Between lie the islands which form the harbour. They are very steep, and of bare granite. *Goddard Island* lies to the S.W. of Caribou Island, and is joined to it and another islet by shoal water; it has a small rock off it, 130 fathoms to the S.W., and 350 fathoms to the South of it is *Goddard Rock*, which dries at low water. On the other side of this channel, opposite to these rocks, are the *Watch*, a small uncovered rock, and *Breaking Ledge*, which just covers at high water. The entrance to the harbour between these is 460 fathoms wide, and 17 fathoms deep. *Beacon Islet* lies W.S.W. $\frac{1}{2}$ W. 1 mile from *Goddard Islet*; it is rather low, and a pile of stones on it. Three-quarters of a mile W. of it is *Red Head*, an island bearing E.N.E. (N.E. by N. $\frac{1}{2}$ N.) 900 fathoms from *Whale Island*. *Fish Islet* lies between them. To the N.E. of *Red Head Island* is *Chain Island*, formed by two peninsulas, and beyond it *Bonne Esperance Island*, three-quarters of a mile long. *Lion Island* lies a quarter of a mile East of *Bonne Esperance Island*, and between them is a low islet, leaving a narrow and difficult channel between it and *Bonne Esperance Island*. Off the East side of *Lion Island* is the *Whelp Rock*, which is always

uncovered, and 50 fathoms from the island. Between this rock on the West, and Goddard and Caribou Islands on the East, may be termed the inner entrance from the main channel.

To enter the Bonne Esperance Harbour, being to the eastward, and the wind from the East, stand toward Caribou Island, and when off the South side, and half a mile from it, the South sides of Beacon and Red Head Isles, and the North side of Fish Islet, will be in one, bearing W. $\frac{1}{4}$ N. Bear up on this mark, or else steer West, keeping the lead going, and a sharp look-out for Goddard Rock. You will have about 9 fathoms at low water, until past this, when it will deepen suddenly to 15 or 19 fathoms, and then you will be in the channel. Bear immediately N. by E., and Whelp Rock will be right ahead in one with the West side of *House Island*, lying close under the mainland, about a mile from Lion Island; it has a house on it. Keep on this bearing till past the Bold Rock, off the S.W. point of Goddard Island, bearing a little eastward to clear Lion Bank and Whelp at a cable's length, and then run up W.N.W. close along the inner sides of Lion and Bonne Esperance Islands into the harbour, anchoring where you please, in 12 to 16 fathoms, over a muddy bottom. The whole bay may be considered as a harbour; wood and water may be had in abundance from the mainland.

In coming from the West with a leading wind, keep half a mile from the South point of Whale Island, and steer E. by N., to avoid two 4-fathom dangers—one the *Whale Patch*, lying half a mile E. by S. from the centre of Whale Island, the other two-thirds of a mile South of Beacon Island, called the *Middle Patch*. These may be avoided by not coming within a less depth than 10 fathoms, or by keeping southward of the track above mentioned. Keep on this bearing till Whelp Rock and House Island are in one, bearing N. by E.; then haul in upon that bearing, and proceed as before. There are several other entrances into Bonne Esperance Harbour, between the surrounding islands.

ESQUIMAUX BAY AND RIVER lie to the North of Bonne Esperance Harbour. *Esquimaux Island* lies in the middle of the bay, and forms, with the main to the East, a very narrow channel, which runs $1\frac{1}{2}$ mile E.N.E., and then opens into a wide space with two islets in it. The mouth of the river and the trading post may be reached by keeping along the East coast. The trading post is on a sandy point, backed by spruce trees, 2 miles above Esquimaux Island. The river abounds with salmon. The approach to this river from the westward is so intricate, from the number of islands, that no directions can be given.

ESQUIMAUX ISLANDS.—These islands commence at Caribou Island, and extend for 14 miles to the westward. They are generally bare of trees, and are of all sizes and heights under 200 feet. They form an endless number of channels, which it would be impossible to describe; and off them are several small rocks and shoals, some of which are fully 4 miles from the mainland.

Proceeding westward from Whale Island, $4\frac{1}{2}$ miles W. by N. $\frac{1}{4}$ N. (*W.S.W.*) we come to the *Fort Rocks*, which are low, and extend 650 fathoms to the S.W. of *Old Fort Island*, which is of moderate height, and $1\frac{1}{2}$ mile in diameter. The only channel through the islands, between Whale and Old Fort Island, is the *Whale Channel*, between Whale and Tent Islands.

Mermot Islet is $1\frac{1}{2}$ mile W.N.W. of the outer Fort Rock; it is low, and has a ledge off it a quarter of a mile to the S.W. Midway between Fort Rocks and Mermot Islet, the course in through *Old Fort Channel* will be N.E. $\frac{3}{4}$ N., with very deep water the whole way to *Old Fort Bay*, which runs toward the N.E. for 4 miles, with deep water to its head.

The *Dog Islands* lie to the West of the Fort Rocks; they are very numerous, and are surrounded with innumerable rocks and shoals, although there is anchorage between the northern of them and the main, which can be got at easily with a westerly wind from Shecatia, by running under the mainland, in the channel between it and the ledges lying off it.

The *Eider Islands* lie to the North of the Mermot Islands, and East of the Dog Islands.

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From the Outer Dog Rocks the *Porpoise Rocks* lie W.N.W. $\frac{1}{2}$ W. $3\frac{1}{2}$ miles, and are three-quarters of a mile off shore; the *Boulet Islet* lies $3\frac{1}{2}$ miles further on in the same direction. It is a small round-backed islet, green at the top, and about 70 feet high. Together with the opening to Lobster Bay, $1\frac{1}{2}$ mile E.N.E. from it, it serves to point out to a vessel its position off the coast. *Lobster Bay* is a narrow inlet running 4 miles to the N.E., and towards its upper end there is anchorage.

The *Peril Rock* is the outermost danger on this part of the coast. It lies $1\frac{1}{2}$ mile S.S.W. from the Boulet, and dries at half-tide.

Rocky Bay runs $1\frac{1}{2}$ mile inland to the N.E. by E., and is 1 mile East of Lobster Bay. There is a small cove and fish stage, which is well sheltered, 1 mile up it, on the S.E. side. To the West of Lobster Bay is *Napetepes Bay*, which is very similar to it, and runs N.E. for $4\frac{1}{2}$ miles. Being open to the sea, there is no shelter with a southerly wind, and is, as well as those to the East of it, too narrow to beat out of with a contrary wind.

Shecatia Island lies W.N.W. $3\frac{1}{2}$ miles from Boulet Island, and contiguous to it on the West is Mistanoque Island, and lying close to the main. Mistanoque Bay lies directly behind the island of the same name, and runs inland 2 miles to the N.E.; towards the head the depth decreases, so as to be convenient for anchoring.

Mistanoque Harbour.—Opposite the mouth of the bay, on the North side of the island, is Mistanoque Harbour, with a depth of 15 to 20 fathoms. Vessels may anchor in less water a little to the East, between the East point of the bay and the island. *Enter Islet* lies nearly half a mile to the West of Mistanoque, and *Diver Islet* lies off its western side; and to the South of which, a reef of rocks runs out 130 fathoms. These islets are low, and 400 fathoms to the N.W. of them is a group of small islands, forming, with the others, the western channel to the harbour, which is quite clear. There is nothing immediately outside Shecatia, Mistanoque, Enter, or Diver Islands; so that no other directions seem necessary, than to run through the centre of either channel which may be preferred.

Shag Islet bears W. $\frac{1}{2}$ S. $7\frac{1}{2}$ miles from Mistanoque. It is the best guide for making the latter from the West, as the Boulet, &c., is from the East. It is small and high, with a round peaked hill, looking green in the middle, and is very remarkable. To the S.E. by E. from it there are many rocks; *Shag Rock*, the outermost, is 2 miles from it. When three-quarters of a mile South of the Shag Rock, the South point of Shecatia will bear E.N.E. 8 miles off, and this course will take a mile to the South of the *Three Rocks* lying midway between them.

CUMBERLAND HARBOUR bears N. by E. $\frac{1}{2}$ E. 3 miles from the outer Shag Rock. It is an excellent harbour, the best and easiest of access on this coast. It may be known by a remarkable high hill on the main land, $3\frac{1}{2}$ leagues North from the entrance of the harbour; it is the highest in the neighbourhood, and resembles a castle at the top. The harbour should be approached between the Shag Rock and the Three Rocks, which bear E.N.E. $2\frac{1}{2}$ miles from the other. The islands forming the harbour are of moderate height, the easternmost making in two round hills. In sailing in there is no danger but what shows, except a small rock, which lies S. by W. rather more than half a mile from the West point of the entrance. As soon as you arrive within its outer points, haul over to the West side, bear N. by W. $\frac{1}{2}$ W. three-quarters of a mile to the inner point on the West, and then haul to the eastward and anchor where you please. Water can be procured here.

The coast at this part, lying between Mistanoque and Cape Mecattina, is broken into immense bays and inlets, the islands being very large, of moderate height, and partially covered with moss. The outer coast is lined with small islets and rocks, which are very difficult to pass through, while within them there is a great depth of water in the intricate channels and bays between the islands and main.

Sandy Harbour lies N.N.W. $\frac{1}{2}$ W. $2\frac{1}{2}$ miles from Shag Island, in the large island of the same name. To sail into it, pass to the East of the *Egg Rocks*, lying $1\frac{1}{2}$ mile N.W. by W. from Shag Island, and keep the starboard point of the bay, bearing N.E. more than half a mile from Egg Island, on board in going in. You will then

are a small uncovered rock to the North, lying toward the East side off the entrance to the harbour, and which may be passed on either side, and then steer N.N.E. $\frac{1}{2}$ E. for the harbour; and when within the entrance, haul to the N.W. and anchor in 5 or 6 fathoms.

Port Augustine is very small, with a narrow and intricate entrance. There is a seal-fishing and trading post here. The entrance to it is to the West of *Augustine Chain*—a chain of small islets, the outer one a smooth round rock; the South extremity of the chain bearing W. $\frac{1}{2}$ S. 7 miles from *Shag Island*.

Eagle Harbour, on *Long Island*, is not fit for anything but small vessels, the entrances being narrow and intricate; and this part of the coast is very dangerous, on account of the numerous islets and rocks off it.

Wood Island, so called from its being covered with wood, lies off the entrance of *Fish Harbour*, N. $\frac{1}{2}$ W. $\frac{1}{2}$ miles from the *Bottle*, on the North of *Great Mecattina Island*. The entrance to *Fish Harbour* is on either side of *Wood Island*, the northern being the best, there being a ledge to the South of the island which always shows; and a rock of 2 feet one-third of a mile S.S.E. $\frac{1}{2}$ E. from the East point of the island. Wood and water may be obtained, and there is a trading establishment here.

Ha-Ha Bay is at the western end of the islands which hide the mainland from between it and *Mistanoque*. It runs N.E. by N. for 8 miles, and has several good anchorages, but is out of the way of vessels. *Seal Point*, the western side of the entrance, is a mile N.E. of *Wood Island*.

GREAT MECATTINA ISLAND is to the South of *Ha-Ha Bay*, and is 2 miles S.E. from *Red Point*, the nearest part of the main. It is $3\frac{1}{2}$ miles long, North and South, 3 miles wide, and about 500 feet high in the centre. It is granitic, and the position of the island, with relation to the high land inside of *Cape Mecattina*, 4 or 5 miles W.N.W., distinguishes it from any other island in the gulf.

Nearly joined to its North point is the *Bottle*, a high round islet, with a small rock close off it; to the N.W. by N., and half a mile in the same direction, is a rocky shoal of 4 fathoms. *Bluff Head* is the high N.E. point of the island; and between it and the *Bottle* is a cove, 1 mile deep, called *Island Harbour*, sheltered from the East by a cluster of small islets and rocks, leaving a passage on either side of them. The anchorage is near the head of the cove, in from 14 to 20 fathoms.

Treble Hill Island lies E. by S. about 3 miles from the centre of the island. *Flat Island* lies S.S.E. $\frac{1}{2}$ E. 3 miles from the South point, and the *Murr Islets* lie S.W. about 4 miles from the same point, and a quarter of a mile N.E. by E. from the easternmost of them, is a ledge on which the sea generally breaks. These islands are quite bold-to, and swarm with sea-fowl.

Mecattina Harbour is small and safe, lying between *Mecattina Island* and the mainland, $3\frac{1}{2}$ miles N.W. by W. $\frac{1}{2}$ W. from *Round Head*, a high peninsula on the West side of *Great Mecattina Island*, and $2\frac{1}{2}$ miles N.E. from *Cape Mecattina*. The eastern entrance is rendered difficult, from a reef of rocks running across it to the northward, and should not be attempted but in fine weather, as the slightest mistake would place the vessel on shore. The western entrance is in the small bay between *Mutton* and *Mecattina Islands*, but there is no anchorage in it; and to enter the harbour it is only necessary to keep in the middle, there being no danger, to pass safely through the narrow western entrance. The depth within is 6 or 7 fathoms, but 3 fathoms can only be carried through the entrance. Wood and water can be procured, and it is much frequented by whale fishers.

To the West of *Mecattina Harbour* is *Portage Bay*, lying 2 miles N. by E. from the South point of *Cape Mecattina*. It runs in about $1\frac{1}{2}$ mile to the northward, and affords some shelter. In the mouth of the bay is a small islet, towards the East side, which forms a small harbour, the western entrance to which is the best. In the approach to this harbour there are two 15-foot ledges to be avoided, one 400 fathoms S. $\frac{1}{2}$ W. from the West end of *Mutton Island*, and the other half a mile N.E. by E. from the southern *Seal Rock*, which is three-quarters of a mile N.E. by N. from the

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South point of Cape Mecattina. Inside the bay, just within the entrance, there is also a snug cove on the East side for small vessels.

Great Mecattina Point.—The S.E. extremity is in lat. $50^{\circ} 44' 10''$ North, and long. $59^{\circ} 5' 13''$ West. It is a long and very remarkable promontory of the mainland, and of moderate height for some distance to the northward of its extremity; but about 3 miles to the North, it rises to the height of 685 feet above the sea, and the *high land of Mecattina*, at the back of the Mecattina Harbour, is the highest land upon this coast.

From the point there are some islands and rocks, extending for $2\frac{1}{2}$ miles nearly in a line S.S.E. $\frac{1}{2}$ E. from the southern extreme of the promontory.

The coast between this and Cape Whittle is of the most dangerous character to a stranger falling in with it at night or thick weather, and the quantity of wrecks found almost everywhere demonstrates this.

Little Mecattina Island.—The eastern point of this land lies W. by S. (S.W.) 15 miles from Great Mecattina Point, and between them is an extensive bay, filled with innumerable islands and rocks, among which no vessel could find her way, and all description is therefore useless.

Little Mecattina Island is nearly divided into two parts by the *Bay de Salaberry*, on its western side; the northern portion is very low, composed of sand, covered with moss, and connected to the southern part by a very narrow isthmus. The South part is remarkable land, the highest part of which is 800 ft. above the sea, and is visible from a great distance, while the islands and coast around it, being lower, cannot be discerned so far.

To the N.N.W. of the island is the *Little Mecattina River*, which is large, and falls 30 ft. over granite, $2\frac{1}{2}$ miles above the island. There is no channel for vessels between the island and the main.

HARE HARBOUR is on the East of the island, and has several rocks and ledges in it. It is open to the South, but the swell there is not large enough to affect a vessel.

In coming from the East to this harbour, the outermost danger in the space between it and Cape Mecattina is the *Fin Rocks*, lying W.S.W. $\frac{1}{2}$ W. 10 miles from Cape Mecattina, and E. $\frac{1}{2}$ N. $5\frac{1}{2}$ miles from Point Antrobus, the S.E. extreme of Little Mecattina Island, and between which is a large open bay, called the *Bay of Rocks*. With an easterly wind, these *Fin Rocks* ought to be passed at the distance of half a mile. After passing them, $2\frac{1}{2}$ miles westward, the *Scale Rock* will be 400 fathoms to the right, and the *Tail Rocks* three-quarters of a mile distant; and one mile further on the same course, the *Single Rock*, just above water, will be three-quarters of a mile to the right, and which should not be approached nearer than a quarter of a mile, on account of three sunken rocks around it, 150 fathoms distant. When abreast of this, bear north-westward by degrees, till half a mile West of it, when the entrance to the harbour will be quite clear, and to the W.N.W. It lies between *Daly* and *Price Islands*, and within the entrance, about 170 fathoms, on the East side, is the *Watch Rock*, above water, and *Bold Islet*, one-third of a mile from the entrance. On the West side, bearing N. $\frac{1}{2}$ W. 200 fathoms from the East extreme of Daly Island, which is the West side of the entrance, lies *Safe Rock*, above water; and nearly midway between it and Bold Islet, is *Rag Ledge*, which just dries at low water. These are the principal dangers near the entrance, and when within them you can choose the anchorage, by the lead, avoiding some 4 to 6-fathoms rocky patches. In coming here from the West, after passing one-quarter of a mile off *Staff Islet*, lying off the East side of Little Mecattina Island, the entrance will bear N. $\frac{1}{2}$ W. one mile distant; and it cannot be mistaken, as it is the only channel through which you can see clear into the harbour, the other channel between Daly and Price Islands to the East of the proper channel, being intricate and unsafe, and therefore must be avoided.

Little Mecattina Cove is on the East side of the island, to the N.N.E. of Point Antrobus, but it is small and deep. Water can be procured at its head.

The South shore of Little Mecattina Island, to *Cape Mackinnon*, is high and bold.

with remarkable benches of white boulder stones occasionally; and to the West of the island is *Aylmer Sound*, in which there is no danger that cannot be seen.

The *Spray Reef*, awash at low water, lies W.N.W. $\frac{1}{2}$ W., $\frac{1}{2}$ mile from Cape Mackinnon. There is no good anchorage in Aylmer Sound, until beyond the *Doyle Islands*, behind which is *Lou Road*, and *Louisa Harbour*, which is about 200 fathoms wide at the entrance, and vessels can ride within, in from 3 to 5 fathoms, over a muddy bottom. It is sheltered from the W.S.W. by the Doyle Islands, and the approach to it is to the East of them, keeping them aboard, to clear some ledges lying in the entrance of *Salaberry Bay* to the N.E.

Cape Airey is the South point of the *Harrington Islands*, and bears W. $\frac{1}{2}$ S. (S.W. $\frac{1}{2}$ W.) 5 miles from the South point of Little Mecattina Island; and 2 miles S. by W. $\frac{1}{2}$ W. from it is *Black Reef*, of low black rocks above water: and W. by N. $\frac{1}{2}$ mile from Cape Airey is *Major Reef*, awash, which is $\frac{1}{2}$ mile from the *Netagamu Islands*, on the same line of bearing. These islands are small, with a remarkable mound on the largest of them. *Netagamu River* bears N. by W. $\frac{1}{2}$ mile from the islands, and may be known by the sandy beach, backed with a thick growth of spruce trees on either side of the entrance, which is narrow and deep, and $\frac{1}{2}$ mile from which are the falls, 50 feet high. A bar of sand extends a mile from the entrance, and is extremely dangerous to boats; it has 3 ft. water over it.

The *St. Mark Islands* lie W.S.W. from Cape Airey, 10 miles distant; they are of bare steep granite, and bold all round. The *Cliff Island* and *Boat Islands* lie to the West of them.

Watagheistic Island lies to the North of these; it is 3 miles long, and above $\frac{1}{2}$ mile broad, and lies in the mouth of a large bay, forming a large sound within it, in which there are several good anchoring places. These cannot be approached without 7 miles of dangerous navigation, and should therefore not be attempted but under absolute necessity. To the North of the *St. Mary Islands* are several islets, rocks, and reefs; *Cove Island* is the largest, bearing 4 miles N.N.W. from the North point, and there are thickly scattered rocks both above and below water, between it and the *Netagamu Islands*. The eastern entrance between *Watagheistic Island* and the main is narrow and intricate, but the western entrance is half a mile wide; and though there are several rocks and ledges in it, yet it can be safely sailed through with proper care; but there is no good anchorage on the route to, or outside either entrance to *Watagheistic*.

St. Mary Reefs are four dangerous ledges, just under water, extending a mile N. and S.; the southernmost bearing S.W. $\frac{1}{2}$ S. $\frac{3}{4}$ miles from the S.W. extreme of the *Boat Islands*, W.S.W. $\frac{1}{2}$ W., and 6 miles from the S.W. extreme of the *St. Mary Islands*. The *Tender Rock* is small and awash; it lies N. by W. $\frac{1}{2}$ W. a mile from the northernmost *St. Mary Reef*, and 2 miles S. $\frac{3}{4}$ W. from the westernmost of the *Middle Islands*, which lie within the *Boat Islands*, between them and *Watagheistic*.

Between the *Middle Islands* and *Wapitagun* the coast is broken into coves, and lined with islets and rocks innumerable, among which nothing but a very small vessel, perfectly acquainted with the coast, could find her way.

The *Etamamu River* enters the sea at 4 miles N.E. from *Wapitagun*. It is rapid, and there is a trading and salmon-fishing post at its mouth.

Mistassini Rock is a remarkable block of granite, resembling a mortar, and sometimes called the Gun by the fishers. It is an excellent guide to the eastern entrance to *Wapitagun*, from which it is distant three quarters of a mile to the westward.

Southmakers Ledge lies S. by W. $\frac{3}{4}$ miles from the *Mistassini Rock*, W. $\frac{1}{2}$ N. (S.W. by W. $\frac{1}{2}$ W.) 9 miles from *St. Mary Rocks*, and $\frac{1}{2}$ miles S.E. $\frac{1}{2}$ E. from *Cape Whittle*. The course from this dangerous reef to *Greenly Island*, near the entrance of the Strait of *Belle Isle*, is East (N.E. by E.) distance 128 miles. It is a small rock, which is never entirely covered in moderate weather; the extent of the reef around it is 130 fathoms East and West, and 50 fathoms North and South, and there is no danger near it. The soundings are very irregular round it.

WAPITAGUN HARBOUR is a long narrow channel between the outer islands of *Wapitagun*, which are of bare granite, and appear as but one island, and *Wapitagun*

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Island to the northward of them, and is completely sheltered; the western entrance to the harbour is sharp round the western extremity of the outer Wapitagan Islands which lies E. $\frac{1}{2}$ S. from Cormorant Point, 600 fathoms off. This entrance is about 80 fathoms wide, and the harbour itself is narrow and unsuitable for vessels above 150 or 200 tons.

To enter in from the southward with an easterly wind, bear for the eastern entrance which has been pointed out; there is nothing in the way. On the West side of the entrance there is a rock and ledge which shows, and therefore you must keep on the East side, steering N.W. by N. one-third of a mile; within the entrance there are three small islets, and to the northward a cove running in to the westward, round a steep rocky point, which has a sunken rock close off it to the S.E. Leave all three islets to the left, passing close to them, and bear up to the westward between them and the steep rocky point; this is the safest passage, but a good look-out ought to be kept.

To enter the harbour by the western entrance with a westerly wind, run down between the Southmakers Ledge and the *Cormorant Rocks*, which lie to the South of Lake Island, bearing to the North to pass the S.E. Cormorant Rock, at the distance of half a mile. This rock will be readily known from the Nest Rock, covered with birds, and whitened by them; and 120 fathoms to the West of it, 400 fathoms to the N.E. of the S.E. Cormorant, is a 2-fathom ledge, which must be left on the left. Then haul to the westward a little, so as to leave the Slime Rock, or N.E. Cormorant, not less than 300 fathoms on your left, to avoid another 2-fathom ledge, bearing N.E. $\frac{1}{2}$ N. one-quarter of a mile from that rock. Passing close to the East of this, steer for the islet in the channel, which you will see between the West extreme of the outer Wapitagan Islands and Cormorant Point; but to pass to the eastward of Long Ledge, lying midway between Slime Rock and Cormorant Point; the course must not be above N.N.W. $\frac{1}{2}$ W., or the West end of the before-mentioned islet on with the high point, which is the East end of Lake Island, lying northward of the islet. When within 2 cable's lengths of the islet, the harbour will begin to open to the eastward, when you must bear up quickly for it, leaving the islet to the northward, keeping 200 fathoms off the West point of the outer Wapitaguna, to clear a ledge lying off it, and when it bears to the West of North, proceed into the harbour and anchor where you please.

CAPE WHITTLE, the S.W. point of *Lake Island*, is in latitude $54^{\circ} 10' 44''$ N., and longitude $60^{\circ} 6' 46''$ W., and from this point the coast of Labrador trends to the West. There is water to be had on Lake Island, but wood is procured from the mainland.

The flood from the East and the ebb from the West usually run past here at a rate varying between half a mile and one mile, but are much influenced by the winds.

IV.—THE NORTHERN SHORE OF THE GULF BETWEEN CAPE WHITTLE AND CAPE DE MONTS, INCLUDING THE MINGAN ISLANDS.

GENERAL REMARKS.—From Cape Whittle to Kegashka, the coast, like that to the eastward of it, is of granite, and the islets and rocks literally not to be counted. The islets are bare of wood, and covered with peat, full of stagnant ponds of black water, where ducks and other water-fowl breed, and frequented by numerous flocks of the Labrador curlew in August and September. There are plenty of berries, but they do not always ripen. Altogether, it is a wild, dreary, and desolate region; and, in a gale of wind on shore, the appearance is terrific; it is one line of foaming breakers.

To the westward of Kegashka, fine sandy beaches, in front of sandy cliffs, 70 or 80 feet high, and a country thickly wooded with spruce trees, commence and continue to Natashquan Point, a distance of $13\frac{1}{2}$ miles.

Parallel with this coast, and at distances varying from 6 to 11 miles, there are banks of sand, gravel, and broken shells, on which the depth of water is various, between 24 and 40 fathoms. There is more than 50 fathoms of water in some parts, between these banks and the shore. Cod-fish are often caught in abundance on these banks, principally by American schooners.

Seen from the distance of 4 or 5 leagues, the coast presents an outline so little diversified, that it is nearly impossible to distinguish one part from another; and it is only when a vessel approaches within 4 or 5 miles from the outer rocks, that its broken and dangerous nature becomes apparent; and although there are few coasts more dangerous, either to a vessel unacquainted with its nature, or unaware of its proximity on a dark night, or thick fog, yet with the assistance of the chart, due caution, and a constant use of the deep-sea lead, it may be approached with safety, and a vessel may even stand close in to the outer rocks and breakers on a clear sunny day, provided there be a trusty person aloft to look out for shallow water, for the bottom can be seen in 4 or 5 fathoms of water.

The coast between Natashquan and the Mingan Islands is low near the sea, rising a short distance back into mounds and ridges, but nowhere exceeding 400 feet in height. It is composed of primary rocks, with the exception of a sandy track, 10 or 12 miles West of Natashquan. The sandy tracks are always thickly wooded with spruce trees, and the country generally is here less bare than it is further to the eastward.

CAPE WHITTLE.—From Cape Whittle to Natashquan Point, the bearing and distance are W.N.W. $\frac{1}{2}$ N. ($W. \frac{1}{2}$ S.) 63 miles. Off the cape to the S. and W. are several small rocks, above and under water, the outermost of which, the *Whittle Rocks*, covered at half-tide, are $2\frac{1}{2}$ miles distant from it.

Wolf Island is larger and higher than the other islands usually are, and is $6\frac{1}{2}$ miles N.W. by W. of Cape Whittle, and between them is *Wolf Bay*, which is 6 or 7 miles deep. Between Wolf Island and the cape there are numerous rocks and ledges, with intricate and deep channels, rendering the approach to the bay very dangerous: but there are no dangers that do not show.

Coacocho Bay, the next to the westward, is the only place affording anchorage to large vessels upon this part of the coast. It is not at all difficult of entrance, although the number of islets and rocks in every direction make it appear so. There is an excellent harbour called the *Basin*, in the head of the bay, and another formed by an arm running in to the E. by N., named *Tertiary Shell Bay*, which is equally safe. Further out than these harbours, the bay is more than half a mile wide, and quite sufficiently sheltered from the sea, for the safety of any vessel with good anchors and cables.

The entrance to the bay is formed on the East by Wolf Island, and Outer Islet, lying one mile S.W. of Wolf Island, and on the West by Audubon Islets.

The GRANGE ROCK is a dangerous outlying shoal, which was discovered by Captain W. Grange while commanding the mail screw steamer *North America*, 27th September, 1858, which struck on it at 1:30 p.m. of that day in very fine weather. The Admiralty Survey showed a depth of 47 fathoms near the spot, and therefore its existence was entirely unsuspected. A subsequent examination by Captain Orlebar, R.N., showed it to be the shoalest part of a narrow ridge of rocks three-quarters of a mile long in a W.S.W. direction. The 15-foot spot bearing from Outer Islet S.W. by S. $1\frac{1}{4}$ mile. It is the easternmost of three dangerous ledges off the entrance to Coacocho Bay.

At 2 miles W. by N. $\frac{1}{2}$ N. from Outer Islet, and 2 miles N.W. $\frac{1}{2}$ N. from Grange Rock, is the *South Breaker*, with less than 12 feet water; and $2\frac{1}{2}$ miles N.W. by N. from this, and $2\frac{1}{2}$ miles West of Point Audubon, is the *S.W. Breaker*, with only 3 ft. water; the channel between them is clear and deep. To enter the bay, leave Outer Islet and the rocks to the North of it, 500 fathoms to the eastward, and when abreast of these rocks, a chain of low rocks, which project to the S.W. of *Emery Island*, will be seen right ahead. Bring the point of this chain to bear N.E. $\frac{1}{2}$ N., when it will appear on with the extreme point of the mainland, on the N.W. side, near the head

of the bay, and run in on this mark, leaving some rocks, which lie 600 fathoms off the East side of Audubon Islets, to the port, and then haul to the northward a little, so as to leave the *Emery Rocks* on the starboard. Their outer points bear N.N.E. $\frac{1}{2}$ E. 3 miles from Outer Islet, and when up to them, the bay is open before you, and clear of danger. The further in, the better the ground, and the less the swell with S.W. winds, which are the only winds that send any swell into the bay. Tertiary Shell Bay is quite clear, excepting a small rock, one quarter of a mile within the entrance, which you must leave on the starboard hand; within it is perfectly landlocked, with from 5 to 11 fathoms, muddy bottom.

The *Basin*, lying to the North of Tertiary Shell Bay, is entered by leaving the latter to the East, and continuing the course till within half a mile of the island, at the head of the bay. Then steer over to the eastward, towards that island, to avoid a shoal of boulder stones, extending 200 fathoms off the West side of the bay, leaving a deep channel between it and the island, 100 fathoms wide. Leave the island 50 fathoms to the eastward, and as you pass through, the water will deepen from 9 to 19 fathoms, as soon as you are past the inner end of the island, when you must haul to the N.W., into the mouth of a small bay, anchoring in 8 fathoms, over mud, and perfectly sheltered. On the East side of the entrance of the river is a house occupied for fur-trading and salmon-fishing.

Olomanosheebo River, called also by the Canadians *La Romaine*, is a considerable river, but very shoal, and there is a trading-post on the East side, but which cannot be seen from the sea. It lies 4 leagues westward of Coacocho, and the coast between is formed of innumerable islets and rocks.

Treble Islet and the *Loon Rocks* lie to the westward, the latter always visible, and 3 miles from the mainland, and are the outermost danger on this part of the coast.

Wash-sheecootai Bay is 10 miles West of Olomanosheebo; off its entrance are several small rocky ledges, that make it very difficult of entrance. Three miles from *Cloudberry Point*, the western point of the bay, the bay contracts to a very narrow inlet, with several rocks and islets in it. Eight miles above this is a trading-post of the Hudson's Bay Company.

Musquarro River, another post of the Hudson's Bay Company, is $\frac{1}{2}$ miles westward of Cloudberry Point, and is situated 3 miles within the West point of a bay full of small islets and rocks, becoming narrow and rapid just within the entrance. It will be known by the houses which are on the East side of the entrance, and also by a remarkable red and precipitous ridge of granite, about 200 feet high, about 2 miles to the West of the river.

KEGASHKA BAY is a wild place, safe in fine weather only. The bottom is sandy, bad holding ground. It lies $5\frac{1}{2}$ miles westward of Musquarro Point, between westward of Cloudberry Point, which must not be approached within half a mile, and *Kegashka Point*, on the West, 3 miles from Curlew Point. Kegashka Point is an island nearly joined to a rocky peninsula, which is distinguished from all other islands on this coast, by being partly covered with spruce trees. A chain of small islets, wide apart from each other, afford very indifferent shelter from the prevailing southerly winds, and the heavy sea which they roll in upon the coast. The best berth is in the S.W. corner of the bay; the vessel must be moored with an open hawse to the eastward, and have a third anchor on shore to the S.W., so as to be able to haul close in under the point, in the S.W. and southerly gales; her bows will then be within 15 or 20 fathoms of the rocks, and the spray of the sea, breaking on the point, will reach her bows.

To enter the bay, the best channel is between a small and low black islet, lying between *Green Island* (which is covered with grass, three-quarters of a mile eastward of Kegashka Point) and Kegashka Point. This channel is 170 fathoms wide, and 8 deep, and is quite clear; the only direction necessary when coming from the westward, is to give the South extremity of Kegashka Point a berth of a quarter of a mile, or to go no nearer than 8 fathoms; then run along the East side of the point, which is quite bold, leaving all the islets on the starboard hand. Three-

quarters of a mile on the N.E. $\frac{1}{2}$ N. course, will bring you to the narrow channel before mentioned; haul round the point to the north-westward, at the distance of half a cable, and when within it anchor as before stated. In coming from the East, give Curlew Point a berth of half a mile, and run N.W. $\frac{1}{2}$ N. $3\frac{1}{2}$ miles, till Kegashka Point bears North, and then proceed as before directed. The roar of the surf upon the rocks and reefs in every direction, after a heavy southerly gale, and on a still night, is deafening. The white spray, glancing in the light of the moon, or of the Aurora Borealis, which is very brilliant upon this coast, is beautiful and grand. These sounds and sights, together with the rolling of the vessel, from the side-swells round the point, which take her on her beam, are quite sufficient to keep every one on the alert in such a place. Only one vessel can be secured in this harbour as above—there is not room for more.

Kegashka River, another fishing station of the Hudson's Bay Company, is 3 miles West of the bay, and only affords shelter for boats.

NATASHQUAN POINT lies 16 miles westward from Kegashka River, the coast between being a line of sandy beaches in front of sandy cliffs covered with spruce trees.

Two miles East of the point is *Mont Joli*, which is merely a slight elevation of the ridge, rising to about 100 ft. high. It is only remarkable as being the western limit of the American fishery; for by convention with the United States, of 20th October, 1818, the inhabitants of the said states, renouncing previous claims, have, for ever, in common with British subjects, the liberty of taking fish on the southern coast of Newfoundland, between Cape Ray and the Ramea Isles, and on the western and northern coasts, from Cape Ray to the Quirpon Isles; also on the shores of the Magdalen Islands, and on the coasts, bays, harbours, and creeks of Labrador, from Mont Joli through the Strait of Belle Isle, and thence northward, indefinitely.

From Natashquan Point the East point of Anticosti bears S.W. $\frac{3}{4}$ S. (S. $\frac{1}{4}$ W.) 57 miles, and $1\frac{1}{2}$ mile S.W. from Natashquan Point there is a small $4\frac{1}{2}$ -fathoms cod-bank, upon which, as upon other banks to the eastward of the point, which lie from 6 to 11 miles off shore, there are sometimes large quantities of cod taken.

Natashquan River is on the West side of the point, and enters the sea at 3 miles north-westward from its South extremity. The mouth of the river, between low, sandy points, is fully a mile wide, but is filled by a low, sandy island, having narrow channels on each side, the southern of which has a depth of from 6 ft. to 9 or 11 ft., according to the tide, and there is the same depth within, where there is a Hudson's Bay Company's post.

Little Natashquan Harbour lies $3\frac{1}{2}$ miles N.N.E. of the river, and is only fit for small vessels; and from its convenience and proximity to the excellent fishing grounds, it is of great service to the fishing vessels.

The entrance to it is between some islets on the East, which lie near the mouth of the Little Natashquan stream, the westernmost of which is much the largest, and on the western side is a rather high and round-backed islet of grey granite, with a wooden cross on it. Off this islet a reef extends S.W. by S. rather more than half a mile. Between the two sides of the entrance is a Central reef, part of which always shows, and which is bold-to, on its East and South sides; the other sides must have a berth in passing them. An extension of this reef with 17 feet water was discovered by H.M.S. *Niobe* touching on it in 1869; the spot lies about 120 yards N.W. by N. of the North rock of the Central reef above water. To enter the harbour, having arrived in 12 fathoms at half a mile distant from the harbour, and made out the islets at the entrance, bring the West point of the longer island on the East side to bear N.E. by N., and the islet with the cross on it will bear N. by E. $\frac{1}{4}$ E.; and then steer for the latter, till abreast of the outer part of the reef to the westward, and then bear sufficiently to the eastward to pass on either side of the Central reef, keeping clear of the shoal water on its North and N.E. ends, and anchor in the centre of the harbour in 4 fathoms, with the rock of the Central reef bearing S.S.W. $\frac{1}{2}$ W. 180 fathoms off, and the cross N.W. by W. $\frac{1}{4}$ W.

A rock with 9 feet on it at low water lies with the beacon on Beacon Islet, bearing

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N. $\frac{1}{2}$ E.; the church on with first detached rock off the large island on the S.W. side of the harbour W. by S. nearly; and the flagstaff at Jersey establishment, N.W. $\frac{1}{2}$ W.

Washtawooka Bay is an intricate and dangerous place, with shelter for shallops and boats. It is 5 miles N.W. of Little Natashquan and $3\frac{1}{2}$ miles eastward of *Agwanus River*, a large stream, the approach to which is very dangerous. Five miles north-westward from this is *Nabesippi river*, which is much smaller, and will only admit boats in fine weather. On the West bank, a short distance within the entrance, stands a house and store, a trading post of the Hudson's Bay Company.

To the West of this, between it and the Mingan Islands, there are several rivers and small bays, which are so full of rocks and small islets, that no written directions for them would be of any avail.

Wachteeshoo Hill is of granite, and 127 ft. high, bare of trees, 18 miles N.W. by W. of Nabesippi, and 14 miles E.S.E. of St. Genevieve Island; and 6 miles inland, North from it, is *Saddle Hill*, 374 ft. high; these are remarkable, and serve to point out the situation of a vessel at sea. There is a fishing post of the Hudson's Bay Company here in a cove to the westward of the rocks.

Appeletat Bay is 3 miles from the south-east point of St. Genevieve Island, the easternmost of the Mingans. It is of no use to vessels, as it is crowded with ledges and shoals.

MINGAN ISLANDS.—These are a chain of limestone islands, of moderate height, perhaps nowhere exceeding 300 ft. above the sea. They are separated into two divisions by Clearwater Point, the easternmost of which has been called the Esquimaux Islands; but besides that the island, properly so called, belongs to the other or western division, there is another group bearing the same name on the coast to the eastward. They will therefore be considered as all comprised within the title of the Mingan Islands.

Their general character, in nautical language, is low. They are bold and frequently clifty on the North, East, and West sides, low and shelving toward the South, in which direction the reefs and dangers exist. They possess very little soil, but nevertheless are thickly wooded with spruce, birch, and poplar, on the side toward the mainland; though toward the sea barren tracts often occur.

Supplies of wood and water can be readily obtained from the principal islands; wild berries are abundant in their season, and so are different kinds of wild fowl. Quadrupeds are scarce, but there are plenty of seals on the limestone reefs, and a few cod-fish off the coast.

There are 29 islands in all, extending about 43 miles from St. Genevieve on the East, to the Perroquets on the West end of the chain. Of these, Large Island is the largest, as its name implies. It is about 10 miles in circumference. Hunting Island is nearly as large, and Esquimaux Island not much smaller. The northern points of these islands are nowhere more than $3\frac{1}{2}$ miles from the mainland—the southern points never more than $6\frac{1}{2}$ miles.

The mainland is of low granite hills; St. John's Mountain is the highest part of the chain in the neighbourhood, 1,416 ft. above the sea. Toward the eastern end of the islands the main becomes very low, the coast of sand and clay, and thickly wooded, the hills being very far back in the country.

The tides are not strong among the islands, perhaps never exceeding a knot excepting in the very narrow channels; it rises about 6 ft. in spring tides.

St. Genevieve Island is the easternmost of the group, and is about 5 miles in circumference. On the mainland, 2 miles N. $\frac{1}{2}$ E. from the bluff N.E. point of the island, is *Mount St. Genevieve*, an isolated table hill, 332 ft. high, marking, with the N.E. point of the island, the position of the *East Channel*, between the island and the main.

In approaching this island there are two dangers to be avoided, *the Saints*, two low bare rocks, half a mile to the South of the island, leaving a foul channel of 5 fathoms between them and the island, and the *Bowen Rocks*, which lie two-thirds of a mile

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ST. GENEVIEVE AND BETCHEWUN HARBOURS.

asunder; the *North-western rock* of 3 ft., $1\frac{1}{2}$ mile E.S.E. $\frac{1}{2}$ E. from the Eastern Saint; the *South-east Bowen rock*, with 6 ft. least water, two-thirds of a mile S.E. $\frac{1}{2}$ S. from the N.W. Rock, and S.E. by E. $\frac{1}{2}$ E. $1\frac{1}{2}$ mile from the East Saint, which will be just open to the northward of the Western Saint; the whole of this dangerous part should be avoided by vessels.

ST. GENEVIEVE HARBOUR is on the N.W. side of the island, between it and the main, and it may be entered either by the *East Channel* or by the *Saints Channel*, between St. Genevieve Island and Hunting Island, to the West.

To enter by the East Channel, when at least 3 miles off the island, in order to clear the Bowen Rocks, bring the N.E. point of St. Genevieve in one with *Indian Point*, which is a low wooded point of the main, forming the East point of *Pillage Bay*, bearing N.W. by N., and standing in on this course will leave the Bowen Rocks half a mile to westward, and when the S.E. point of St. Genevieve and the *West Saint* come in one, change your course a little to the northward, to clear a flat shoal extending 300 fathoms from the East side of the island. Give the *N.E. Point* a berth of a cable's length, and passing close to the shingly North point of the island, bring up in 10 fathoms, half-way between that point and Anchor Island, on the N.W. side of St. Genevieve.

To enter by the Saints Channel.—Keep at least 5 miles off the coast of St. Genevieve, so as to be outside of the *Collins Shoal* of 15 ft.; it is a small patch of rocks, lying $2\frac{1}{2}$ miles South from the S.E. point of Hunting Island. The marks on this dangerous shoal are the East point of St. Genevieve, just open to the eastward of the Western Saint, bearing N.W. $\frac{1}{2}$ N., and the North point of Wood Island on with the South side of the Garde Rock.

Being outside this shoal, bring the West points of St. Genevieve Island and Anchor Island in one, bearing North, and run in on this leading mark, until the North sides of the two Saints come in one, bearing E.S.E. $\frac{1}{2}$ E.; then steer upon this leading mark, to clear the reef extending 280 fathoms off the S.W. point of St. Genevieve, until the East side of Mount Genevieve, seen over the sandy S.E. point of Anchor Island, comes in one with the N.W. point of St. Genevieve Island, bearing N.N.E. $\frac{1}{2}$ E. Then bear to the North, which will take through the centre of the channel between St. Genevieve Island and Hunting Island, and then proceed to the harbour round Anchor Island.

Wood and water may be obtained, and the whole space between the islands and the main is well sheltered, and will accommodate a great number of vessels of the largest class.

BETCHEWUN HARBOUR lies to the West of that of St. Genevieve, and between Hunting Island and *Partridge Point*, the western point of *Pillage Bay*. One entrance to this harbour is through the East Channel, before described; but if, instead of proceeding to St. Genevieve, this is made for, you must pass to the northward of Anchor Island, which is quite bold on that side, when the entrance will bear W. by N., between the North point of Hunting Island, a clifly mound, and *Partridge Point*, on the N.E. side of which is Mount Partridge, a wooded, steep-sided hill, which is easily recognised. You must pass close to the North point of Hunting Island, to avoid a shoal, extending one-fourth of a mile off *Partridge Point*; and when within the entrance, steer for a low islet in the centre of the harbour, bearing W. by N., and anchor one-third of a mile from it.

The Saints Channel, before described, is another entrance; and when at its northern part, bear along the N.E. side of Hunting Island, which is quite bold, instead of proceeding East to St. Genevieve.

On the West of Hunting Island is *Puffin Bay*, and *Charles Island*, forming its western side, is $3\frac{1}{2}$ miles from Hunting Island. It is 3 miles long and $1\frac{1}{2}$ wide, and about 200 ft. high. On its North side is **CHARLES HARBOUR**, which is narrow, but perfectly secure, with a depth of from 4 to $6\frac{1}{2}$ fathoms, with mud bottom.

To enter Charles Harbour from Puffin Bay, bring the N.E. point of Charles Island, which is high and clifly, to bear N.W., then steer for it, rounding it at a distance of 100 or 180 fathoms, bearing to westward into the harbour. To enter from *Trilobite*

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Bay, to the N.W. of the island, and which affords excellent anchorage, sheltered from all but the South, give the N.W. point of the island a berth of from 60 to 140 fathoms, and bear round S.E. by E. into the harbour.

CLEARWATER POINT is low, but the shoal water does not extend above one-quarter of a mile South of it. Its S.W. extreme is in lat. $50^{\circ} 12' 35''$, and long. $63^{\circ} 27' 4''$; and with *Ammonite Point*, 2 miles to the East, it forms a promontory, dividing the Mingan range.

One mile and a half due West from Clearwater Point is a rocky 3-fathoms shoal; and there are three others with two fathoms, lying to the northward of the first and in a line from the point towards Walrus Island; the outer and westernmost being rather more than 2 miles from the point. The leading mark for passing outside these shoals is, the South points of Gull and Fright Islands in one, bearing N.W. by W.

Westward of this point are *Walrus Island* and *Sea Cow Island*, lying close together in a N.E. direction; off the S.E. point of Sea Cow Island the reef extends three-quarters of a mile to the southward, and off Walrus Island for 200 fathoms.

ESQUIMAUX ISLAND lies to the West of these, and is about $2\frac{1}{2}$ miles long, and $1\frac{1}{2}$ mile wide. Off its S.E. point is Gull Island, half a mile distant, but no passage between; it is bold-to. On the S.W. side of Esquimaux Island there is a shoal extending towards Fright Island.

ESQUIMAUX HARBOUR is on the North side of the island, between it and the main; the depth is from 5 to 15 fathoms, sandy bottom, and it is nearly $1\frac{1}{2}$ mile long, in a N.W. $\frac{1}{2}$ W. direction, between the N.E. and N.W. points of the island, which shelter it well, if vessels anchor well over toward the island. The best channels to it are between Walrus Island and *Green Island*, which lies one-third of a mile E.S.E. from Esquimaux Island, on the East, and between *Fright* and *Quin Islands* and *Niapisca Island*, on the West.

The East passage, the best with easterly winds, is three-quarters of a mile wide, and is clear and deep; and it is only necessary to keep the middle of it, bearing North towards the N.E. point of Esquimaux Island, which will bear in the centre of the channel, and haul round it, at a cable's length off, to the N.W. into the harbour.

The West channel, between Niapisca Island and Fright Island, is preferable to that between the latter and Esquimaux Island, leading north-eastward; having no leading marks, and reefs extending on either side, it is extremely dangerous, and should therefore not be attempted.

In coming here with a westerly wind, the reefs off the South and East of Niapisca Island must be avoided; to do this, do not open the N.W. point of Fright Island, clear of the South end of Quin Island, until *Moniac Island*, which is $2\frac{1}{2}$ miles N. $\frac{1}{2}$ E. of Niapisca Island, is in sight to the East of Niapisca, when you may bear round into the channel; bearing N.N.E. $\frac{1}{2}$ E. until *Moutange Island*, lying next West of Moniac Island, is open to the North point of Niapisca, when you will be clear of the reef on the East of that island; then haul up, to clear the reef which projects half a mile W.N.W. from the North point of Quin Island, until you open the N.E. point of Esquimaux, or the North point of Sea Cow Island, to the northward of Quin Island; and then run in between Quin Island and *Point aux Morts*, towards the North point of Esquimaux Island, and haul round it south-eastward into the harbour. Between Point aux Morts and Esquimaux Point there is shoal water, and to the West of the former there are some small islets, which will be cleared by keeping the N. and N.E. points of Esquimaux Island in one, bearing S.E. $\frac{1}{2}$ E.; if these are opened before passing as far eastward as Quin Island the vessel will be ashore.

Quarry Island is the next westward from Niapisca, and is about the same height; it is divided from the latter by a channel with a small islet in it, but no safe passage for shipping. Off its South side there are some reefs extending one-third of a mile.

On its North side is *Quarry Cove*, which is a small land-locked harbour, and easy

of entrance; the West side may be kept close in entering, and anchor in the centre in 9 or 10 fathoms.

Large Island is divided from Quarry Island by a clear channel 400 fathoms wide, the water being shoal towards Large Island, and therefore in passing through it, Quarry Island, which is bold-to in its northern part, must be kept on board. The island is 4 miles long, and its highest part 200 ft. above the sea; it is thickly wooded.

The Birch Islands lie 2 miles to the West of Large Island. In a line with these two islands, and Harbour Island to the northward, is the *Middle reef*, about a mile South of the Outer Birch Island, and within a line joining the South points of Large and Mingan Islands. A part of it always shows. To clear the eastern side of the shoal water around it, bring the eastern sides of the two Birch Islands in one.

Between this reef and Large Island is **LARGE CHANNEL**, which is the best channel to Mingan Harbour with an easterly wind; and in passing through it, the only thing to be observed is, that the reefs extend to the westward, off the shore of Large Island, from 2 to 3 cables' lengths, as far in as the *Flower Pot Columns*, a mile to the northward of its S.W. point, after which the island becomes bold. Further in, the Birch Islands form the western side of the channel, at the distance of nearly two miles from Large Island. The eastern side of the Outer Birch Island is quite bold, and the shoal water extends only 150 fathoms off the East end of the Inner Birch Island.

MINGAN ISLAND is $3\frac{1}{2}$ miles westward of the Inner Birch Island; the channel between, called *Birch Channel*, is all deep water, and is the best by which to proceed to Mingan Harbour with westerly winds.

The island is nearly 2 miles long, and nearly 1 mile broad. It is about 100 feet high, and bare of trees. The shoal water does not extend above 300 fathoms off its South point, but to the S.W. and West the reefs, including the islets, run out nearly 600 fathoms. The island is bold on its North and East sides.

Mingan Patch lies S.W. $\frac{1}{2}$ S. $3\frac{1}{2}$ miles, from the South point of Mingan Island, and with the South point of the Outer Birch Island on with the North point of Large Island; it is a patch of rocky ground, with 9 fathoms least water, yet there is a very heavy swell on it at times.

Perroquet Islands are four small islets, and are the westernmost of the Mingans. The easternmost of them are 2 miles distant N. by W. from the centre of Mingan Island, and have a reef of flat limestone extending off them three-quarters of a mile to the S.S.W. The *north-western* islet has shoal water off it one-quarter of a mile, both to the East and West, but is clear at the distance of 200 fathoms to the northward.

These islets are low and bare of trees, and are frequented by great numbers of puffins.

MINGAN HARBOUR is between Harbour Island, to the North of the Birch Islands and the main, which is low, and has a fine sandy beach. The harbour is about a mile long and 210 fathoms wide, with plenty of water for the largest ships.

HARBOUR ISLAND is 2 miles long, and its greatest breadth is not half a mile; its shore is precipitous toward the harbour, about 100 ft. high, and thickly wooded. Off the East and West ends of the island there are reefs extending 240 fathoms from high-water mark.

Northward of the East end of the island is the mouth of the *Mingan River*, off which there is a shoal, dry at low water, extending 700 fathoms from the entrance of the river, which protects the harbour from the effects of easterly winds. The river, turning towards the West, forms a peninsula, on the isthmus of which stand the houses of the Hudson's Bay Company's post, which is in charge of a "grand bourgeois," or chief factor, who preserves a strict monopoly of trade with the Indians. At the salmon fisheries here the fish are very fine, and in abundance.

To enter this harbour from the eastward, bring the N. or inner side of Harbour Island to bear N.W., and the houses ought then to appear fully open their own

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breadth to the northward of the island. Steer for the houses, thus open, leaving the East end of the island, 160 fathoms on your left, and taking care to keep the S. side of the sandy point of the main, which forms the western entrance of the harbour, shut in behind the N. side of the island; for when they are in one, you will be on shore on the sandy shoal of Mingan River. Proceed till you have arrived at the centre of the harbour, keeping a cable's length off the North side of the island, and anchor anywhere in from 9 to 13 fathoms.

In coming from the westward, run in towards the sandy beach of the mainland, at the distance of three-quarters of a mile to the West of the island, until the sandy point, which forms the West end of the harbour, comes on with the face of the clay cliffs to the East of the Company's houses, bearing E. by S., or in 11 fathoms water. Run in upon this bearing along the beach, and give the above sandy point a berth of half a cable, and anchor as before directed.

The northern sides of all the islands westward from Niapisca Island are bold to, so the *Mingan Channel*, between them and the main, is clear and safe throughout; on its North side is *Moutange Island*, to the North of Quarry Island; the shoals which extend between it and Moniac Island to the E., and which are nearly dry at low water, from the northern side of the channel, which it would be better not to approach nearer than at a distance of $1\frac{1}{2}$ mile from the opposite shore, or within 10 fathoms water.

Mingan, as well as Esquimaux Harbour, has this great advantage, that vessels can enter or leave them with easterly or westerly winds.

The following observations on this harbour are by Mr. Jeffery, M.R.N. :—

"The coast of Labrador, about Mingan, and eastward to the point called Mount Joli, is low, and nothing remarkable appears to point out, to any one unacquainted, the position of a ship. The small harbour of Mingan is well sheltered, with sufficient water for any vessel. Harbour Island, which forms the anchorage, is rather difficult to make out, being low, covered with trees, and very much resembling the coast of the main.

"To a vessel bound for Mingan, and coming round the W. end of Anticosti, I should recommend steering for Mount. St. John, which is the highest land on that part, and makes like a saddle. This will lead you about 12 miles to the westward of the harbour, and well clear of the Perroquets, or westernmost of the Mingan Islands. When within a mile and a half of the coast, run along shore, by the lead, until you make out the harbour.

"On coming from the eastward, it may be advisable to run inside the islands, into the Mingan channel, as soon as possible after making the land; any of the channels may be taken, with a little caution, and the lead kept going. When you are through, you will see the houses of the Hudson's Bay settlement: by keeping them their own length open, you will go in clear of the reef off the East end of Harbour Island. It is necessary to be very cautious in approaching the banks on the North side. The island is bold, and may be approached within 40 or 50 fathoms; but you must open the W. point on the North shore with the North point of the island, until you are well into the harbour. The anchorage is anywhere off the houses. No supplies of any kind can be obtained, except wood and bad water.

"The flood tide sets strongly through between the islands and along the coast to the westward; the ebb in the contrary direction. Lat. of Harbour Island $50^{\circ} 17' 30''$, long. $64^{\circ} 2'$."

RIVER ST. JOHN.—From *Long Point*, North of Mingan Island, a broad beach of fine sand reaches to the *River St. John*, the entrance to which lies nearly $6\frac{1}{2}$ miles N.N.W. $\frac{2}{3}$ W. from Perroquet Islands; and *Mount St. John*, an isolated saddle-backed hill, 1416 ft. high, is 11 miles N.E. $\frac{2}{3}$ N. from the entrance. It is frequented occasionally by fishing schooners, early in the season. At the entrance between the clay cliffs on the West and a sandy point on the East side, the river is 130 fathoms wide; it increases in breadth to nearly half a mile immediately within the entrance, and then gradually contracts. The tide ascends it about 6 miles, and the river then becomes too rapid to be navigated.

There is good anchorage outside the bar, there being 3 fathoms at three-quarters of a mile from the mouth.

It divides the governments of Labrador and Canada. The E. point of the entrance is in lat. $50^{\circ} 17' 3''$, and long. $64^{\circ} 23' 13''$.

From the River of St. John to *Maggie Point* is W.N.W. 8 miles, and between them is *Maggie Bay*, in which there is good anchorage, in winds off the land. Three-quarters of a mile W. of the *Maggie River*, which is large and rapid, but of no use to boats, is a rocky shoal, a quarter of a mile off shore.

Ridge Point is $3\frac{1}{2}$ miles W.N.W. $\frac{1}{2}$ W. from *Maggie Point*, and from it there extends a long narrow ridge of rocky ground, with from 4 to 6 fathoms water, for $4\frac{1}{2}$ miles to the westward, across a bay, and at times there is a very heavy sea upon it.

Sawbill river is 23 miles westward of the River St. John; it may be distinguished by the clay cliffs immediately within the entrance, and by the peculiar hills on either side of it. It will afford shelter to boats and very small craft, but it can only be entered in very fine weather.

Shallop river is $7\frac{1}{2}$ miles N.W. by W. from *Sawbill River*, and affords shelter only to boats. Off this and *sandy River*, $2\frac{1}{2}$ miles to the westward of it, there are some rocks, the outermost of which are half a mile off shore.

The coast of this part is impregnated with iron, the black oxide of which is here found abundantly. It has a strong magnetic action on the compass on shore, causing it to vary from 14 to 29 degrees West; but at the distance of two or three miles, this error does not exceed half a point, and at the distance of five or six miles it is insensible.

Manitou River is the next to the westward, $4\frac{1}{2}$ miles N.W. by W. from *Shallop River*. It is the largest on the coast, excepting the rivers St. John and Moisie. It may be readily distinguished from a vessel several leagues off the coast, by two remarkable patches of clay cliff, one of which is close to the eastward, the other about one mile to the north-westward from it. The falls on this river, half a mile from the entrance, are of the most magnificent description. An immense sheet of water rushes over a precipice of porphyry, the height of which is 113 ft.

There is good anchorage off this river, the entrance bearing N.E. $\frac{1}{2}$ E. $1\frac{1}{2}$ mile distant, in 15 fathoms, over mud, and 1 mile from *Manitou Point*, the nearest point of the shore. Smaller vessels may anchor further in-shore, to the westward of the bar. The only danger is a small rocky shoal, bearing W. by N. $2\frac{1}{2}$ miles from the entrance of the river, about three-quarters of a mile off shore.

Bason river is $10\frac{1}{2}$ miles W.N.W. $\frac{1}{2}$ W. from *Manitou River*, but is only fit for boats or very small craft. *Cape Cormorant* lies $1\frac{1}{2}$ mile West of it, and *Blaskowitz Point* is $5\frac{1}{2}$ miles W.N.W. $\frac{1}{2}$ W. from the latter, and between them are the *Cormorant Islets*, off which is *Cormorant reef*, small and dangerous, lying $2\frac{1}{2}$ miles W. $\frac{1}{2}$ N. from the *Cormorant Cape*. To avoid this, vessels should keep *Points Blaskowitz* and *St. Charles* open of each other, as when in one, bearing W.N.W., the mark is on the reef.

Point St. Charles is in lat. $50^{\circ} 15' 25''$, and long. $65^{\circ} 48' 50''$. It is the eastern point of *Moisie Bay*; *Point Moisie* at the entrance of the *Moisie River* being the western, and 11 miles apart.

Off the point is a dangerous reef, being so bold that there is no warning by the lead. Some of the rocks always show, but the outermost patches are always covered; these last lie three-quarters of a mile off, to the S.S.W. from the South extreme of the point, and vessels should take care not to be becalmed to the westward of this reef, lest the heavy swell from the S.W., so frequent on this coast, should heave them toward the reef.

Trout river is on the head of the bay, and is the termination of the rocky shores from the E. and the commencement of the bold sandy beach, which extends $6\frac{1}{2}$ miles S.W. by W. to the River Moisie.

The **RIVER MOISIC** is a larger river than the St. John, but is much obstructed by the sand-bars, which are formed by the great force with which the river descends;

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there is usually not less than 2 ft. least water on the bar. It is very bold-to off its mouth; but from Point Moisie, the South point of the river, there is a shoal extends $2\frac{1}{2}$ miles W.S.W. $\frac{1}{2}$ W. from the point, to the *Moisie rock*, which is exceedingly dangerous. It is as bold as a wall to the South and S.W., and can generally be seen in fine weather, from the change in the colour of the water, and from heavy breakers when there is much sea running.

There is no close leading mark for clearing this rock, but a vessel will be $1\frac{1}{2}$ mile from the edge of the shoal, when the North side of the Manowin Island is on with the South point of Great Boule Island.

SEVEN ISLANDS BAY.—The sandy point, which is the eastern point of the entrance of this magnificent bay, is 11 miles westward of Point Moisie. The bay is completely sheltered by the *Seven Islands* lying off its entrance, which is $2\frac{1}{2}$ miles wide. A fine broad, bold, sandy beach extends for 3 miles northward from the East point of the bay, to the entrance of the principal river, near which stands the Hudson's Bay Company's trading post. The houses at this post cannot be seen from the outer parts of the bay, but there is wooden store on the beach, off which vessels usually anchor. Water can be obtained from this river at high tide.

The *Seven Islands* are high and steep, of primary rocks, very thinly wooded, and can be made out from a distance of 7 or 8 leagues, being unlike anything else in the gulf. The easternmost of these islands are the *Great and Little Boule*, the former of which is the highest of them all, its summit being 695 ft. above the sea at high water; its South point bears West $9\frac{1}{2}$ miles from Point Moisie. The channel between these two islands is subject to baffling winds, and the flood tide sets strongly to the West, and the ebb to the East, through it: a circumstance that must be attended to in all the channels between the islands.

The *East rocks*, which are low and bare of trees, lie between Little Boule and the shoal to the N.E.: they are out of the way of vessels, which ought not to go into this embayed place.

The *Little and Great Basque Islands* lie next to the Boules; Great Basque, the inner island, is 500 ft. high.

Manowin and Carousel lie to the S.W. of the Basques: the former is 457 ft. high; the latter much lower, and the southernmost of the islands; its South extreme is in lat. $50^{\circ} 5' 29''$, long. $66^{\circ} 23' 35''$.

The *West rocks* lie between Manowin and the peninsula, which forms the West point of the Bay of the Seven Islands. They are too small and low to appear as the seventh island, but the peninsula has that appearance when seen at a distance from sea, being higher than any of the islands, and 737 ft. above the sea at high water.

There are three obvious channels into the bay, viz., the eastern, middle, and western channels: the eastern, between Great Basque and Sandy Point, is seldom used, having a rock in its centre, which is covered only in high tides. The principal and best is the middle channel, between the Basque Islands on the E., and Carousel, Manowin, and *Point Chassé*, the eastern point of the peninsula, and off which a reef runs out 120 fathoms from the shore. The course through it is due North, its breadth is $1\frac{1}{2}$ mile and it is quite free from danger.

The West channel is also quite free from danger, and perhaps in N. or N.W. winds, is preferable, to save beating; it is between the West Rocks and Point Croix, the South point of the peninsula. This point deflects the ebb tide towards the West Rocks, and this ought to be attended to. The peninsula is quite bold-to, and the mid-channel is nearer to it than the West Rocks: it is quite clear, and there are no leading marks, nor are there any required for any of the channels. The ground is not fit for anchoring until well within the bay. Outside the islands the water is extremely deep, and their shores are quite bold-to.

The stream of tides in the bay and in the principal channels seldom amounts to a knot; but in the narrow channels it may amount to 2 knots in spring tides, when accelerated by strong winds. It is high water on the full and change days at ten minutes past one; spring tides rise 9 ft., neaps 8 ft.

From the S.E. point of Carousel to Cape de Monts, the bearing and distance are S.W. by W. $\frac{1}{2}$ W. (S.W. $\frac{1}{4}$ S.) 60 miles. The coast between is less bold in appearance than that to the eastward, and there are no detached rocks off it.

St. Margaret river is 6 miles N.W. by W. from Point Croix, nearly at the head of *St. Margaret Bay*; it affords shelter to boats only.

The Cawee Islands lie S.W. by W. $\frac{1}{2}$ W. 16 miles from St. Margaret Point; they are two small hilly islands, nearly bare of trees. Great Cawee Island is the largest and easternmost, and about 250 ft. high. Little Cawee Island is a mile to the S.W. of it, and is composed of two islets.

There is a bay on the inner or N.W. side of Great Cawee, in the mouth of which there is anchorage at a cable's length from the island. It is an intricate and dangerous place, but may be of great use as a place of refuge in case of distress. In making for it from the eastward, steer N.W. past the N.E. side of Great Cawee Island, keeping half a mile off, to avoid the shoal off the mouth of the cove, until the point of the main land to the westward opens clear of the North side of the island. When you arrive between the rocks and the island, which you will come to by steering for the point of the mainland, keeping it midway between the North side of the island and these rocks, which lie to the northward of it, haul into the mouth of the small bay, which is on the N.W. side of the latter, and anchor in 7 fathoms at low water. This anchorage may be come at from the westward, by keeping in mid-channel between Little Cawee and the main; but it would be better to pass between Great and Little Cawee Islands, hauling close round the West point of the latter into the anchorage. The tides run through between the island and the main at a rate seldom exceeding $1\frac{1}{2}$ knot, and generally much less.

Lobster Bay is an excellent open roadstead, between *Point Sproule*, three-quarters of a mile north-westward of Little Cawee Island, and the *Crooked Islands*, 3 miles to the westward of the point; the head of the bay is occupied by an extensive flat but there is plenty of room for the largest ships.

Pentecost river is $1\frac{1}{2}$ mile to the westward of Crooked Island; it would afford shelter to small vessels, but is difficult of entrance. *English Point* is 7 miles S.W. of Pentecost River, and has a shoal extending off it to the distance of one-third of a mile. It is bold-to on the S.E. and E.

Egg Island is 14 miles S.W. $\frac{1}{2}$ W. from Great Cawee Island. It is low and narrow without trees, and three-quarters of a mile long in a N.N.E. $\frac{1}{2}$ E. direction; off each end of the island a reef of rocks extends, forming a natural breakwater, $1\frac{1}{2}$ mile long, the northern end of which is three-quarters of a mile off shore, and the southern end nearly a mile. Opposite the North end of the island, the breadth of the channel is contracted by a shoal extending from the main; on the S.W. part of this narrow part is the best anchorage.

The passage to this from the South and West is quite bold, and no directions are necessary; but if it be intended to run through between the island and the main, stand in to the northward, to 8 or 9 fathoms, or until English Point is open half a point to the northward of the North Rocks; then steer for English Point, giving the inner side of the North Rocks a berth of a cable's length, until you have passed them a full quarter of a mile; you may then haul out to sea, going nothing to the southward of S.E. by E. to avoid the N.E. reef.

The tides running between the island and the main are generally from half to one knot, and part of both the stream of ebb and flood passes through the narrow and dangerous 3-fathoms channel between the island and the North Rocks.

Calumet river is $2\frac{1}{2}$ miles W. by S. from the S.W. end of Egg Island. There are reefs to the S.W. of the entrance for a mile, and extending 600 fathoms from the shore. *Caribou Point* is $8\frac{1}{2}$ miles S.W. by S. from Egg Island, and affords shelter for the pilot-boats, which often look out for vessels here.

TRINITY BAY is five miles further south-westward, and affords excellent anchorage. It is a very valuable stopping-place, in westerly winds, for vessels bound up the St. Lawrence, and at these times pilots are generally found waiting to take

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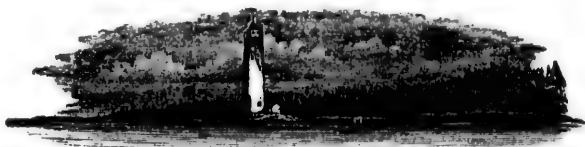
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vessels upward; but in easterly winds they take shelter in St. Augustin Cove, $1\frac{1}{2}$ mile westward of the cape.

On the N.E. point of the bay are two large rocks. The southern rock lies nearly a quarter of a mile to the southward of the point. A river, which falls into it, will supply fresh water. To anchor, come to at half a mile to the eastward of the West point, on which stands a cross, in from 9 to 5 fathoms, and with the point bearing W.S.W. or S.W. by W. Small vessels may anchor in 3 fathoms, at low water, just within the reef, the western point of the bay bearing S.W. At three-quarters of a mile S.W. from the point on which the cross is placed, is a ledge of rocks, dry at low water, and which should not be approached nearer than to the depth of 4 fathoms.

The coast between Cape de Monts and this bay is indented with small sandy coves, and in the interval are three large rocks, always above water, which will be avoided by not approaching nearer than in 8 fathoms.

POINT DE MONTS, and Lighthouse.—The lighthouse on *Point de Monts* is 5 miles to the south-westward of Trinity Bay. It is a mile and a quarter E.N.E. from the extremity of the cape, and bears S. 52° W. from the outer part of Caribou Point, over which, and eastward of it, the light may be seen. The *light tower* is of the usual form, nearly white, and 75 ft. high, and the lantern is elevated at about 100 ft. above the level of the sea, and exhibits a bright fixed light. During fogs and snow storms a gun will be fired every hour.



Lighthouse on Point de Monts, West 1 mile.

Ships from the eastward, approaching the lighthouse, on drawing towards Caribou Point, may bring it to bear W. by S., when they will be in a good fair-way, and may, if requisite, advance toward the land by the lead. But after passing Caribou Point, on drawing toward the lighthouse, they should come no nearer than in 12 fathoms; for thus they will avoid two ledges of rocks, one of which lies E.S.E. from the lighthouse, with only 12 ft. over it; the other lies S.W. from the lighthouse, and E.S.E. from the extremity of Cape de Monts, with 16 ft. over it. These rocks are not more than half a mile from shore at low water.

When a ship is to the westward of the Cape de Monts, the lighthouse will appear in one with the outermost rocks of the same, and the cape will be in one, bearing E.N.E., and from this line of bearing vessels are in the best fair-way for proceeding up or down the river. You may, if it be required, safely approach the North shore, until the lighthouse bears E. by N.; but when it bears E. $\frac{1}{2}$ N. it will be time to tack. When bearing East it will be shut in with the high land, and cannot be seen to the southward of East, at only a mile from the land.

V.—THE SOUTH SHORE OF THE ENTRANCE TO THE RIVER, FROM CAPE ROSIER TO CAPE CHATTE.

This coast is bold and high, quite clear from dangers, and affords no harbour, or scarcely any shelter for vessels. The water is deep all along, and will not give any warning in approaching the coast by the lead; it must therefore be guarded against

G. & R. of St. Lawrence.

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during fogs, or in the night, more especially as the downward current of the river sets over to the South side from Cape de Monta.

The land generally rises from the water's edge into round high hills at the back, and the whole is covered with trees.

Cape Rosier is about 7 miles to the northward of Cape Gaspé. It is a rugged, rocky point, and the shore to Cape Gaspé is very steep, with high perpendicular cliffs. To the S.W. of Cape Rosier, about a quarter of a mile, is a fine sandy bay, with good anchoring ground, decreasing in depth from 14 to 7 fathoms toward the beach, and sheltered from S.W. to N.W. winds. There are several fishing establishments on it and in the vicinity.

The **Lighthouse** on Cape Rosier is 112 feet high, built of white stone, and shows a brilliant fixed light of the first order at an elevation of 136 ft., and is consequently visible 16 miles off. The light is shown from April 1st to December 15th. A fog-gun is established here.

Griffin Cove is $6\frac{1}{2}$ miles W.N.W. from Cape Rosier. The North point of its entrance is bluff, and it has several houses within it. It will afford shelter to small vessels with a West wind, but it is open to the North. Five miles further is *Great Fox River*, off which a vessel might anchor in fine weather: it may be known by the extent of the settlement on its banks, particularly on the southern side. A large stone church has been lately erected. At $3\frac{1}{2}$ miles N.N.W. of Great Fox River is *Serpent Reef*, the only danger on this coast. It runs out one mile S.E. by E. from *Serpent Point*, its outer extreme in 3 fathoms being two-thirds of a mile off shore. Between *Serpent Reef* and *Great Pond River* is *Fame Point*, on which is placed a *beacon*.

Great Pond River, or *Anse de l'Etang*, 10 miles N.W. $\frac{1}{4}$ N. from Great Fox River, will afford shelter to shallops; it may be known by a remarkable high, wooded, conical hill on the East side, and by a beach with a few huts on the West. The river issues from several lakes, one of which is only half a mile through the woods from the fish stages. On *Frigate Point*, which is 10 miles beyond Great Pond River, stands a *beacon*. In all the coves hence to the westward the neat houses of the Canadian fishermen will be seen.

Magdalen River is a considerable stream, and in the bay, at the mouth of it, a vessel can anchor in fine weather, and sometimes schooners warp into the river itself. On Cape Magdalen, the western side of the entrance, a *beacon* is placed. It is 24 miles from *Great Pond*, and 16 miles from *Mont Louis River*, which is a much smaller stream; the small bay, into which it falls, affords anchorage to vessels nearer the East than the West side. Between Magdalen River and *Mont Louis River*, $10\frac{1}{2}$ miles from the former, a *beacon* stands; there is another *beacon* $12\frac{1}{2}$ miles beyond *Mont Louis River*.

Cape St. Anne is 26 miles further westward, in the rear of which are the *St. Anne* or *Shickshoe Mountains*, the highest of which is 14 miles behind Cape Chatte, and is 3,970 ft. above the sea: it is the highest land in British North America.

St. Anne River is 6 miles West of the cape, and can be entered by small schooners at high water. On the coast, at 3 miles beyond it, a *beacon* stands. A few families are settled here, and also at *Cape Chatte River*, who willingly render assistance to such as require it.

CAPE CHATTE is a remarkable hummock, like a short sugar loaf on a point which is lower than the land about it. Its extremity is in latitude $49^{\circ} 6'$, and longitude $66^{\circ} 45' 19''$. At about 3 miles to the S.E. of it is a small river of the same name.

The land over Cape Chatte is very mountainous, and is much broken at the top; hence it may be readily known, as there is no land presenting similar features in any other part of the river.

VI.—GENERAL DESCRIPTION OF THE RIVER.

THE NORTH SHORE FROM CAPE DE MONTS TO THE SAGUENAY RIVER.

The next projecting point, westward of Cape de Monts, described on page 121, is *Point St. Nicolas*, bearing W. by N. $17\frac{1}{2}$ miles. Three miles N.E. by E. from this headland is *Havre St. Nicolas*, or *St. Nicolas Harbour*: between these places, and $6\frac{1}{2}$ miles eastward of *St. Nicolas*, is a little river, called *Godbret* or *Goodbout River*, where the Hudson's Bay Company have a trading post, and where, therefore, provisions may occasionally be obtained, but it affords no shelter. This place may be known by the fall of the land on the East, and clay cliffs on the West.

ST. NICOLAS HARBOUR.—At the entrance of this harbour vessels may occasionally find shelter from westerly winds. The land about it is mountainous; and, if a ship be to the westward of the harbour, and bearing up for it, the entrance may be distinguished from the circumstance of its having all the land on the West dry and barren, the wood being burnt from the mountains; but, on the East side, the mountains are green, and covered with trees. To enter, run boldly in, between the burnt cape and the green one, steering N., and the low cross point, which forms the W. side of the entrance, will appear like an island. The eastern side of the entrance is limited by a reef, one-quarter of a mile long, which stretches S.W. from the green cape; opposite to this reef, on the western side, is another; both dry at low water, but the largest is always to be seen. The anchorage is a little to the northward of the stream of the easternmost reef, in from 12 to 6 fathoms.

The distance between the points of the two reefs is about 1 mile; both are bold; 10 fathoms being close to the eastern, and 4 to the western reef. Small vessels may haul alongside the rock, just within the entrance on the West side, in 10 ft. at low water.

At about 100 yards within the cross above mentioned, a bar commences, which extends thence across the entrance, and has only 10 ft. over it at low ebbs. This part is only two ships' lengths in breadth at low water, but the harbour widens inward to a large basin, where vessels can lie perfectly land-locked in from 10 to 12 fathoms of water, good ground, and on the S.W. side the water is deep close up to the rocks: this place is, however, a bad outlet for ships bound to the westward, as an easterly wind blows directly in, and the land around being mountainous, there is no getting in or out, in a square-rigged vessel, with canvas set.

Those who proceed to the basin must keep their canvas set, and borrow close round the point on which the cross is erected; then shoot in as far as they can, and down with the anchor. To warp in, keep the western side on board.

The bank to the southward of the eastern reef, and all along the shore, is very steep; there is a depth of 50 fathoms at about 500 yards from it. Near the reef, in 20 fathoms, cod-fish are generally abundant.

At *St. Nicolas' Harbour* the tide flows, on the full and change days, at $1^h 55^m$. Spring tides rise 12 ft.; neaps, 7 ft. The flood, of spring tides, runs to the westward about 2 miles an hour, and thus along shore up to the Saguenay River.

English Bay is $11\frac{1}{2}$ miles W.N.W. from Cape St. Nicolas. It affords no anchorage. On its western side is *St. Gile's Point*, opposite the north-eastern point of the Peninsula of Manicougan, and which is the termination of the bold and rocky coast to the eastward of it, while that to the West of it is low and wooded; and this circumstance will enable a vessel to ascertain her position on the coast, whether to the East or West of this part, and of her approach to the dangerous Manicougan Shoals.

MANICOUGAN BAY and Shoals.—This dangerous bay is 11 miles W. by N. from Point St. Nicolas. The shore between is bold and rocky; the land high, and the water deep. The flood-tide sets strongly into the bay, and the ebb strongly out.

The land forming the western point of the bay is much lower than any other near it, and may be readily known by its yellowish sand and clay cliffs, with a fine beach, and very flat for more than 2 miles off.

The East end of the great shoal of Manicougan lies $11\frac{1}{2}$ miles West from Point St. Nicolas. This end is of rocks, terminating in a spit, and dries at low water. The S.W. point of the bay, called Manicougan Point, is $17\frac{1}{2}$ miles W. by S. from Point St. Nicolas. From Manicougan Point the land thence westward trends in a curve, 12 miles, to *Outarde* or *Bustard Point*, at the mouth of the Outarde River, and the great shoal borders the whole, to the distance of $2\frac{1}{2}$ miles from shore. The tide of ebb and flood sets along its edges, but is not perceptible at more than 5 or 6 miles off shore; and on that part, off Manicougan Point, is a great ripple. On the shore, within the shoal, the tides ebb one mile from high water mark, and heavy breakers are seen on its edges, with high reefs of rocks.

Outarde Bay is to the westward of the Land of Manicougan. It is terminated by *Point Bersimies* or *Bersimis*, which is sandy and covered with trees, and the whole is lined with extensive and dangerous shoals. Ships, in rounding Bersimis Point should advance no nearer to it than 2 miles, as the shoal surrounding it is steep-to.

Ships being up to Bersimis Point with the wind at West, and flood-tide, may cross over thence to Father Point, and engage a pilot for the river. Should the wind be at S.W. by W., keep the North land on board until sure of fetching the point.

In Outarde Bay the ebb-tide is slack, and the flood strong. Ships may always get ground in the bay, but should stand in no nearer than 2 miles from shore.

The *Manicougan*, and *Outarde* or *Bustard*, are very large rivers, but unfortunately their navigation is much interrupted by falls at a short distance from the St. Lawrence. The water of the Outarde is entirely white, occasioned by large quantities of impalpable sand and clay being held in suspension; and the vessel, in sailing through it, by displacing the superficial stratum of lighter and fresh water, full of these earthy particles, leaves in her wake a dark blue streak, which may be traced as far as the eye can reach. This sand and clay are the deposit of the rivers, which, in the course of ages, have formed the alluvial peninsula of Manicougan, and also the dangerous and extensive shoals of the same name. The *River Bersimis* is navigable for small vessels as far as 10 miles from the entrance, and it can be ascended to the falls, nearly 40 miles, but it would be difficult for a sailing vessel to reach as far.

Jeremie Island is 6 miles westward of Point Bersimis, the sandy coast extending between them. On the main, opposite the island, is a post of the Hudson's Bay Company, the houses of which may be seen very plainly from within the distance of 6 miles.

Cape Colombier is 5 miles westward of Jeremie, and off it is the *Gulnare Shoal*, discovered by Captain Bayfield in 1830. It is a narrow ridge of granite rock, nearly 2 miles long, parallel to the shore, and having from 2 to 3 fathoms over it at low water.

Baie de Laval is 8 miles westward of Cape Colombier. *Laval Island* is in the mouth of the bay, and all within it is dry at low water. Vessels may approach this bay to within 6 fathoms depth, but to the eastward, between *Wild Fowl Reef* and the *Gulnare Shoal*, the coast ought not to be kept closer than in 30 fathoms.

Point Neuf is another settlement of the Hudson's Bay Company, the buildings of which are readily seen. It may be known by a range of remarkable clay cliffs, like chalk cliffs, between it and the *Baie de Laval*, the only land of this appearance in the river, and which, therefore, is a sure mark.

Point Mille Vaches is 4 miles S.W. from Port Neuf; it is low and sandy, and the shoals off it contract the navigable breadth of the river, between it and *Bicquette*, to $11\frac{1}{2}$ miles. The N.W. reef of *Bicquette* bears from the point S.S.E. $\frac{1}{2}$ E. $12\frac{1}{2}$ miles.

To the West of it is the *Baie de Mille Vaches*, which is filled with shoals of sand

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and rock, the western parts of which are deep and dangerous. The bay extends to the *Esquemin Isles*, 12 miles S.W. $\frac{1}{2}$ W. from the point.

The coast West of this is bold and free from danger, but has no shelter.

The SAGUENAY RIVER enters the St. Lawrence between Lark Point on the West, and Point Vaches on the East, opposite Red Island, 23 miles westward of the *Esquemin Isles*.

This extraordinary river, which was imperfectly known till the late surveys, is as remarkable for the great volume of water which it brings down to the St. Lawrence, as for the enormous depth of its bed, which is fully 100 fathoms lower than that of the St. Lawrence. It comes from the Lake St. John, and at *Chicoutimi*, a trading post of the Hudson's Bay Company, which is 65 miles above its mouth, it becomes navigable, and 6 miles above which, to the rapids, the tide ascends. To *Point Roches* 57 miles from the St. Lawrence, and 8 miles below *Chicoutimi*, it is navigable for the largest ships, and up to this part there is no danger in the river, the shores consisting of steep precipices, some of the headlands rising more than 1,000 feet in height.

The current runs down with great force, the ebb-tide varying from 3 to 5 knots, according to the breadth of the river, which is from two-thirds of a mile to 2 miles. At the mouth of the river, this ebb-tide runs at the rate of 7 knots over Lark Islet Spit, and the S.W. extreme of Point Vaches.

Tadoussac, which is in the entrance of the river, was formerly the principal post of the French, for trading with the Indians. It has declined, and now belongs to the Hudson's Bay Company.

The harbour is off the settlement, a mile within Point Vaches, and is well sheltered, but a heavy anchor should be cast close in shore, on account of the eddies which sometimes set into it from the river.

Across the mouth of the river there is 18 to 20 fathoms, but immediately within, the depth increases to above 100. The current setting strongly over this bar, meeting with the spring ebbs of the St. Lawrence, cause breaking and whirling eddies and rippings; and these streams opposed to a heavy easterly gale, cause an exceedingly high, cross, and breaking sea, in which no boat could live. On the flood at such times there is no more sea than in other parts of the river.

Off the entrance of the Saguenay are several dangerous patches, some of which are buoyed. Off *Lark Point*, which is formed of two clay cliffs, is *Lark Islet*, small and low, but marked by a beacon. It is joined to the land at low water. Opposite this point is *Vaches Point*, easily known by the high clay cliffs. To the N.W. of it is *Rouge Point*, on which is a white beacon. Off *Vaches Point* is a reef extending half a mile, and at $1\frac{1}{2}$ mile from it is *Vaches Patch*, on which is a black buoy, in 2 $\frac{1}{2}$ fathoms.

Prince Shoal.—A small rocky shoal, of some importance in a certain sense, which lies half a mile S.E. of the former patch, was discovered in a singular manner. In the voyage of H.R.H. the Prince of Wales to Canada, in H.M.S. *Hero*, she struck on it on August 18th, 1860, as it had been omitted in the Admiralty surveys. Such an accident might have been of most serious consequence. A published letter would lead the reader to infer that if the vessel had had an Admiralty chart she would have escaped, but in neither of these instances was there the slightest indication of danger on these charts.

The *Prince Shoal* is a small rocky patch, having 3 fathoms of water over it, and is in a S.S.E. direction half a mile from the 4-fathom patch already laid down in the Admiralty charts. Lark Point bears from it W. $\frac{1}{2}$ N., and the black buoy on *Vaches patch* N. by W. It is now marked by a *chequered buoy*.

The western sides of *Brandy Pots* and *White Islet* in line, which clears the Lark Reef, leads on this shoal. *Brandy Pots* should therefore be kept open to the southward of, or just touching *White Islet*, S.S.W. $\frac{1}{2}$ W., which will lead about half a mile to the eastward of the shoal.

BUOYS.—The entrance of the Saguenay is buoyed as follows:—To the westward of the entrance, the white buoy on the outer or southernmost extreme of Lark

Reef is moored in $4\frac{1}{2}$ fathoms, with Red Island lighthouse bearing E. $\frac{1}{2}$ S., and the diamond beacon on the N.E. of Tadousac Harbour in one with the beacon on Lark Islet. On the eastern side of the entrance, on Vaches patch, a black buoy lies in $2\frac{1}{2}$ fathoms, with the beacon on Ilot Point just open to the westward of the beacon on Rouge Point, and Lark Point just open to the southward of the beacon on Lark Islet. On the *Prince Shoal* off the Bar Reef a *chequered black and white* buoy lies in 3 fathoms, with the N.W. Company's house at Tadousac just shut in behind Rouge Point.

To enter the *Saguenay*, have the beginning of the flood, and sufficient daylight to reach Tadousac. Winds from the S.W. southward to N.E., will take vessels into the river with the flood, but the N.E. is most to be depended on; but whether you approach from the S.W. or N.E., bring the western points of the Brandy Pots and White Island in one, and open to the southward of Hare Island, bearing S.S.W. $\frac{1}{2}$ W. Run upon this mark (and it will lead you well clear of the Vaches Patch and Lark Reefs) until *La Boule Point* comes in one with *Point Ilot*, bearing N.W. by W. $\frac{1}{2}$ W. which will clear the S.W. side of Point Vaches Reef; Point Ilot being the rather low N.W. point of the harbour of Tadousac, and La Boule, a high and round-backed hill, forming a steep headland, 4 miles above Tadousac, and the extreme point seen on the same side of the river.

Haul in for the last-named leading mark, keeping the S.W. extreme of La Boule just open, which will clear all dangers; and when as far in as *Point Rouge*, bear towards the trading post, into the harbour, dropping your outer anchor in 16 fathoms, and the inner one close to, or within, low water mark.

THE SOUTH SHORE BETWEEN CAPE CHATTE AND GREEN ISLAND.

Between Cape Chatte and Matane, in a distance of 11 leagues, the shore is all bold and bound with rocks.

In proceeding up the river, after passing Cape Chatte, the first place of remark is *Matane River*, distinguished by a large square white house, and a long barn level on the top. This place may be known from within the distance of 3 miles, by its houses and a bluff cliff, close to the entrance on the western side. Many pilots live here. The River of Matane admits small craft only. The chief settlements occupy both banks, and extend about one mile from its mouth. The two mountains, called the *Paps of Matane*, stand inland to the westward of Matane River, and form the mark for this part of the coast, although Captain Bayfield says they are difficult to make out. At $7\frac{1}{2}$ leagues to the westward of Matane River, is the western point of *Little Metis Bay*, a spot surrounded by rocks, excepting the entrance, and in which small vessels may find shelter from westerly winds, in 3 fathoms at low water. The coast from Matane to Little Metis is entirely barren. *Little Metis* is situate on a long, low, flat, and rocky point, with several white houses, extending about a cable's length to the N.E. This is noticed as a guide to the anchorage at *Grand Metis*, which is 5 miles farther westw. rd. On opening the bay (say close in shore), a square house will be first observed, near the water side; a mile farther, in the S.W. corner, up the bay, on the same view, will be seen the upper part only of a house, which is the establishment of *Grand Metis*.

A vessel may close in with Little Metis Point into 6 or 7 fathoms of water, and run for *Grand Metis*, by the lead, in from 5 to 8 fathoms. Should the vessel be turning up, on the North shore, or in mid-channel, *Mount Camille*, which will be seen, should be brought to bear S.W. by S., which will lead from sea to the bay.

Mount Camille is $6\frac{1}{2}$ miles inland from the nearest shore. Its summit is 2,036 ft. above the level of the sea.

The cove of Grand Metis is nearly dry at low water. A small vessel may bring up here in 3 fathoms, with the wind from S.W., but with a West it affords no shelter. The points that form these coves are very low, and cannot be distinguished beyond the distance of 2 leagues. Great Metis has a large rock in the middle of the cove, Little Metis has none; and the latter may be known from the former, by observing that a round bluff rock lies at its entrance, on the eastern side; not far from which, on the East, is a small hill on the mountain, in the form of a sugar-loaf.

The tide here, on the full and change, flows at ten minutes past two o'clock, and rises from 12 to 14 feet.

With a ship of great draught it is advisable to lie in 6 fathoms at low water, with the house at the East side of the River Metis open to the eastward of the islet in the bay, so that the river may be seen between them. *The high land of Bic will then be just clear of Cape Original*; some of the houses of Little Metis will be seen, and Mount Camille will bear S.S.W.; in such a mooring the swell is broken before it comes in, by the shore. The ground, being clay, is excellent for anchorage; and, with one anchor to the eastward and another to the westward, the vessel will ride in perfect security.

From hence, along the shore, will be observed, at great distances, the small white houses of the inhabitants, which are mostly occupied by pilots or fishermen, who have cultivated small patches of land around them. Occasionally, when, from a wet summer, the harvest of the westward has failed, these small farmers reap a benefit by the greater backwardness of their seasons.

Between Great Metis and the next inlet, named *Cock Cove*, will be seen the high land of MOUNT CAMILLE. The bearing and distance between the coves are W. by S. $3\frac{1}{2}$ leagues; and, from Cock Cove to the projecting land of Father Point, W. $\frac{3}{4}$ S., $4\frac{1}{2}$ miles.

Father Point bears from the West point of Grand Metis Bay W. by S. $14\frac{1}{2}$ miles. It is low, covered with houses, and the regular rendezvous of the pilots, many of whom reside there.

Light.—A light tower, of octagonal shape, and painted white, is erected on the extremity of Father Point. It exhibits, at 43 ft. above the level of high water, a *fixed white light*, which in clear weather will be visible from a distance of 10 miles, when bearing between W. by S. $\frac{1}{4}$ S., round South, and E. $\frac{1}{4}$ N. It is lighted from 10th April to 10th December each year.

Rimousky Road.—The eastern point of Barnaby Island is 3 miles W. by S. from Father Point, and between them is the anchorage or Road of Rimousky, where vessels ride throughout the summer to take in cargoes of lumber. They lie moored in 4 or 5 fathoms at low water, with excellent holding ground, and sheltered from W. by N., round by South, to E.N.E. The best sheltered berth is with the eastern point of Barnaby Island bearing W. by N., Rimousky Church S.S.W. $\frac{1}{2}$ W., and Father Point E.N.E., in 4 fathoms at low-water spring tides over mud bottom. Small vessels can anchor farther to the westward in 3 fathoms at low water, with the East end of the rocks, off the eastern point of Barnaby Island, bearing N.W. by W., and distant a quarter of a mile. The reef does not extend above a quarter of a mile off the eastern point of Barnaby Island, and may be passed by the lead in 4 fathoms. A landing-pier has recently been built at Rimousky 2,150 ft. long, and having at its end a depth of $8\frac{1}{2}$ ft. at low-water springs.

Barnaby Island presents nothing remarkable. A reef extends from each end of it, under which small vessels may find shelter. Between the island and the main the bank is dry at low water, but there is a depth of 14 ft. over it at high water of spring tides. With neap tides only 9 ft. At the little *River Ottey*, 5 miles S.W. from Barnaby Island, fresh water may be obtained.

At a distance of 3 miles to the westward of the Ottey, the coast forms the *Harbour of Old Bic*, which affords shelter to small vessels from westerly winds. Two round islets mark the eastern side of it, and it is 1 mile from them to the western side of

the harbour. The anchorage is midway between these and the West side, in 3 fathoms, the western point bearing West.

Nearly 3 miles West from Bic Harbour, and at the same distance South from Bic Island, is *Cape Arignole*. From this cape a reef extends 1 mile E. by N.

The *high land of Bic* lies S.W. by S. $2\frac{1}{2}$ miles from the N.W. extremity of the cape; it is very remarkable when seen up or down the river, as it consists of high and narrow ridges, parallel with the coast, the summit being 1,234 ft. above the sea.

BIC ISLAND is of moderate height, and covered with trees. This island is 3 miles in length from East to West, and reefs extend from it to the East, West, and North. At three-quarters of a mile from the North side is the islet called *Bicquette*, which is also woody. *Bicquette* is quite bold on the North side, and there are 30 fathoms at a musket-shot from it; but within the extent of a mile and a quarter to the West of it is a chain of reefs, which are dangerous. Between Bic and *Bicquette* there is a passage, but it is intricate. There are no marks for it, and it will be best understood from the chart.

A **Lighthouse** has been erected on the West end of the island of *Bicquette*, and a *revolving light* of the first class was shown for the first time on the 9th of August, 1844; the light is shown every night from sunset to sunrise, from the 1st April to the 15th December, in each year. The tower is 70 ft. high, and the light stands 130 ft. above the level of the sea, the N.W. reef bearing from it due West, $1\frac{1}{2}$ mile. This light will revolve at regulated intervals of two minutes.

A nine-pounder gun is placed near the lighthouse, and will be fired every hour during foggy weather and snow storms.

The *S.E. Reef* extends $1\frac{1}{2}$ mile E. by S. from the S.E. point of Bic Island, and the channels between the rocks and the island should not be attempted.

The *N.E. Reef*, a small patch of black rocks, lies N.W. $\frac{1}{2}$ W. above a mile from the former, and 400 fathoms N.E. by E. from the N.E. point of the island.

The *West Grounds of Bic* are an extensive flat of slate, which partly dries at low water, the outer point of which is three-quarters of a mile W. $\frac{1}{2}$ S. from the West point of the island.

The *N.W. Reef* of *Bicquette*, above alluded to, is the greatest danger, lying West $1\frac{1}{2}$ mile from the West end of the island. The cross mark for it is the West end of Bic in one with the N.W. point of Ha-Ha Bay, bearing S.S.E. $\frac{1}{2}$ E.; but this last-named point can seldom be plainly made out, in consequence of the high land behind it. In approaching the reef from the westward, the North extremity of *Cape Arignole* should not be shut in behind the West point of Bic.

This reef is composed of two rocks about $1\frac{1}{2}$ cable long, and which just cover at high water; both it and *Bicquette* are bold to the northward. There is deep water all along the line from the North side of *Bicquette* to this reef, and also between the latter and the rocks to the S.E. of it, but these are dangerous passages, which ought not to be generally tried, though it is useful to know of their existence in case of emergency.

The **Alcides Rock**, on which the ship of that name struck in the year 1760, has only 4 ft. over it, and bold-to. This rock lies at a mile and three-quarters from the shore, with the West end of the Isle Bic bearing N.E. $3\frac{1}{2}$ miles, and *Cape Original* E. $\frac{1}{2}$ N. $4\frac{1}{2}$ miles. Ten fathoms of water lead to the northward of it.

Razade Isles.—At a mile and a half from shore, and $14\frac{1}{2}$ miles S.W. by W. $\frac{1}{2}$ W. from the West end of Bic, lies the N.E. of two islets called the Razades; these are two large rocks always above water. They bear from each other nearly S.W. and N.E., one mile and a half distant. Ten fathoms of water lead to the northward of them.

Basque Island, a small narrow isle, extending 1 mile and a quarter E.N.E. and W.S.W., bears W.S.W. 5 miles from the N.E. Razade, and S.W. by W. $\frac{1}{2}$ W. 20 miles from the West end of Bic; it appears round, is bluff, and covered with trees. There are no houses on it; extending to the N.W. from its West end is a ledge of rocks, dry at low water, and steep-to.

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Apple Isle, a narrow barren islet, with rocks, lies at 3 miles W.S.W. $\frac{1}{2}$ W. from the West end of Basque, and $2\frac{1}{2}$ miles from shore. Between it and the land there is a passage.

GREEN ISLAND.—This island, with the reefs that project from each end of it, is $2\frac{1}{2}$ leagues in extent from N.E. by E. to S.W. by W. Two families reside upon it.

Lighthouse.—The most remarkable object on Green Island is a lighthouse which stands on its northern side, at about $1\frac{1}{2}$ mile from the N.E. end, and which shows a fixed light at 60 ft. above the level of low-water mark. Behind the lighthouse, a quarter of a mile off to S.S.E., is a *white beacon*, which in one with it leads clear to East of the Red Island Reef. The bearing and distance of Basque Island from the lighthouse are N.N.E. $\frac{1}{2}$ E. $8\frac{1}{2}$ miles; and from the lighthouse to the extremity of the S.W. reef of Green Island, S.W. by W. $5\frac{1}{2}$ miles. There is no other danger on the North side of the island than a dangerous reef, which extends from the lighthouse $1\frac{1}{2}$ mile N.N.E. $\frac{1}{2}$ E. This ledge is a reef of rocks which are steep-to, and covered at high water of spring tides. The other part is steep-to and rocky.

Green Island reef, which is extremely dangerous, runs out from the lighthouse N.N.E. $\frac{1}{2}$ E. $1\frac{1}{2}$ miles, to the 3-fathoms line of soundings. From its N.E. extremity it trends, with a serrated outline, N.E., till it joins the shoal water connecting Green and Apple Islands. Its N.W. side is straight, running S.W. by S. from its N.E. extremity, to the shore close to the westward of the lighthouse, off which it extends only two cables to the N.W. Its shape is therefore irregularly triangular, and the rocks on it dry at low water, nearly three-quarters of a mile out from the high-water mark.

There is excellent anchorage in westerly winds under Green Island Reef, and it is the general rendezvous of vessels waiting for the flood, to beat through between Green and Red Islands. But as the first of the flood comes from the northward, and sets on the shoals, vessels had better not anchor with the light bearing to the westward of S.W. $\frac{1}{2}$ W., or in less than 7 fathoms at low water. With that depth, on that bearing, they will be $2\frac{1}{2}$ miles from the light, 1 mile from the eastern edge of the reef, and the same distance from the shoal water to the southward. If they wish still more room, they may choose their berth in 9, 10, or 11 fathoms, and will find a bottom of stiff mud in either depth.

The ledge of Green Island, Basque Island, and the high land to the southward of Cape Original, in a line bear E.N.E. $\frac{1}{2}$ E.

To ships, on coming up and going down the river, the lighthouse appears like a ship, and very conspicuous. In the night the light may be distinctly seen at the distance of 5 leagues.

The reef from the West end of Green Island dries to the distance of a mile from the island. The westernmost part is detached from the body of it, and the tide sets through the interval toward Cacona. This part is covered at a quarter flood.

THE DESCRIPTION OF THE RIVER CONTINUED.

RED ISLAND lies in the middle of the estuary, off the mouth of the Saguenay River, and bears N.W. by W. $\frac{1}{2}$ W. nearly $5\frac{1}{2}$ miles from the lighthouse on Green Island. It is a low, flat islet, of a reddish colour, without trees, and partially covered with grass.

The reef, which extends $2\frac{1}{2}$ miles to the N.E. of Red Islet, and is $1\frac{1}{2}$ mile wide, is nearly dry in some part at low water; the eastern extremity of this reef bears nearly N.W. by N. from the lighthouse. The depth decreases gradually on its eastern end, but the islet is bold-to on the S.W. A *red buoy* is moored at its East end in $5\frac{1}{2}$ fathoms, and a *red buoy* in $2\frac{1}{2}$ fathoms also marks its S.W. end. The eastern end of the

reef is quite cleared by keeping the lighthouse and beacon on Green Island in one, bearing S.S.E.

The Lighthouse stands on the S.W. point of Red Islet, is 51 ft. high, and is painted red. It shows a *fixed red light* at 75 ft., visible 12 miles off.

Lark Reef, on the North side of the river, lies opposite to the western point of Green Island, bearing N.W. 8 miles from it, contracting the navigation of the river to this breadth. It is at the S.E. extremity of a shoal, extending from *Lark Point* and *Islet*, the entrance of the Saguenay River, as before described, and which bear N. by W. 3 miles from it. *Lark patch*, near the southern end of this reef, never covers, and outside it in 4½ fathoms is a *white buoy*. The space between the point of the reef and the shore dries at low water, nearly out to the point; this can be avoided, as well as those to the N.E. of it, lying off the mouth of the river, by keeping the western sides of the Brandy Pots and White Island in one, and open to the southward of Hare Island, being S.S.W. ¼ W.; but this mark is distant, and cannot always be seen, but the buoy will mark its limit.

THE NORTHERN SHORE of the river, from the Saguenay to Coudres Island, is bold and mountainous. The granitic hills in most part rise immediately from the river, forming steep precipitous headlands. Near the entrance of the Saguenay these hills are not above 1000 ft. high, but those of the Eboulemens attain an elevation of 2,547 ft. above the tide-waters of the river.

Cape Basque is the first mountainous headland S.W. of the Saguenay, bearing S.W. ¼ S. 6½ miles from Lark Point; and about 1¼ mile northward of it is the *Echafaud du Basque*, a small rocky islet in the mouth of a cove, and bearing 4¼ miles W. by S. from the S.E. extreme of Lark Reef, the shoal of which extends as far as this place.

Basque Road is a well-sheltered anchorage lying off this, the best position being with the *Echafaud* bearing W.N.W. rather less than a mile distant, in 10 or 11 fathoms over clay bottom.

Bay of Rocks is about 2½ miles south-westward from Cape Basque, and affords shelter only to boats. *Cape Dogs*, 5½ miles S.W. of Cape Basque, is quite bold and high; and similar to it is *Cape Salmon*, which is S.W. 9¼ miles distant from it. Further to the westward, about 1¼ mile, is *Port Salmon*, which, like *Port Parsley* and *Shetle Port*, to the eastward, are only boat harbours. The settlements are nearly continuous on the banks from hence to Quebec.

Cape Eagle is 5¼ miles S.W. by W. ¼ W. from Cape Salmon, and is of the same character.

Murray Bay is 6½ miles W. by S. from Cape Eagle. It is a beautiful place. The bay is 1¼ mile wide, and nearly as deep, and a rapid unnavigable river falls into the head of it, on which are several grist and saw mills. The bay is nearly all dry at low water, except the shallow channels leading to the river. Vessels occasionally anchor off the bay, with *Point Gaze*, at its East point, bearing W. by N. about 400 fathoms, *Point Pies*, its West point, S.W. ¼ W., and *Point Heu*, E.N.E. ¼ E.

The river at this part, between the Saguenay and Cape Eagle, is divided into two channels, by the Red Island and bank above described, and the shoals and reefs extending in a line along the middle of the river, at each end of Hare Island, in a N.E. and S.W. direction.

THE NORTH CHANNEL, though not that which is generally used, is clear, deep, and broad, and might be used advantageously under proper circumstances, as in the case of scant and strong N.W. winds; but with easterly winds and thick weather, or at night, it must not be attempted, as there would be no leading marks, and the depth is too great and irregular to afford any guidance, besides the want of shelter or anchorage on the North shore.

White Island, on Hare Island North Reef, is covered with trees, and bears from Red Island S.W. ¼ W. nearly 10 miles, and from the N.E. end of Hare Island N.E. ¼ N. 1¼ mile. A shoal of rocks extends from White Island N.E. ¼ E. 3 miles, and

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dries to the greatest part of that distance. Between the N.E. end of this shoal and Red Island, $6\frac{1}{2}$ miles distant, the channel is quite free from danger.

HARE ISLAND.—The East end of this island lies S.W. $\frac{3}{4}$ S. a mile and a half from White Island; thence it extends $7\frac{1}{2}$ miles to the S.W., and in no part one mile in breadth. It is 250 or 300 feet high, thickly wooded, and has no inhabitants.

BRANDY POTS and Lighthouse.—At S. by W. 1 mile and a half from the N.E. end of Hare Island, lie the three islets called the Brandy Pots and Noggin. The northern Brandy Pot, high and covered with trees, is close to the southern one, and the bottom between it is dry at low water. The southern is a whitish rock, almost barren. The *lighthouse* stands 84 yards from the S.E. end of the islet. It is a brick tower, 39 ft. high, showing a bright fixed light at an elevation of 78 ft., and may be seen 10 miles off. The *Noggin*, which lies to the N.E. of the northern Brandy Pot, is likewise covered with trees. At low water these islets are connected by a chain of rocks, leaving a passage for a boat only. Halfway between the Noggin and the N.E. extremity of Hare Island, at half a mile from shore, there is also a reef, dry at low water; but all these are out of the fairway. The depth of 7 fathoms leads clear of them.

To the south-westward of the Brandy Pots the South side of Hare Island has a flat of hard ground extending from it, 3 miles in length, and about one-quarter of a mile in breadth. The whole of this side of the island is bound with rocks.

Hare Island Bank.—This is an extensive shoal lying above, and nearly in the direction of Hare Island. It commences at about a mile S.E. from the S.W. end of the island, and extends thence S.W. by W. and S.W. 9 miles. There is good anchorage on its South side, in 7 fathoms. On its northern side is Hare Island South Reef, the greatest portion of which is uncovered at low water, to an extent of $2\frac{1}{2}$ miles; the part always uncovered is clothed with grass and spruce bushes, lying $2\frac{1}{2}$ miles to the S.W. of Hare Island. The western extremity of this reef bears from that of Pilgrims N.W. by N. $3\frac{1}{2}$ miles; and the eastern end is nearly North $4\frac{1}{2}$ miles from the same. Off the East end of the bank, about a quarter of a mile distant, is a small rocky 2-fathom *knoll*, on which White Island will be just shut in behind the South side of Hare Island. A *red buoy* is moored near it in 3 fathoms. At two-thirds of a mile from the East end of the bank is a 3-fathom *shoal*, on which White Island will be midway between the Brandy Pots and Hare Island.

Between Hare Island bank and the S.W. end of Hare Island there is an unfrequented channel half a mile wide, and with from $3\frac{1}{2}$ to 4 fathoms water in it. To the S.W. the Hare Island bank extends 6 miles from the reef of the same name, and its S.W. end will be cleared in 3 fathoms, by keeping Kamourasca church just open to the westward of Grande Island, bearing S. by W. $\frac{1}{4}$ W. A *red buoy*, in 4 fathoms, is placed on it, with the North sides of Hare Island and Reef in one; and two beacons in one on the East end of Grande Island, Kamourasca. One of these beacons is *red*, the other *white*, and they bear when in one S. $\frac{1}{4}$ E.

The SOUTH CHANNEL, between these banks and the South shore of the river, is justly preferred for the common purposes of navigation. The tides are not so strong, nor the water so inconveniently deep, as in the channel on the North side of the river. It has good anchorage in every part, and a sufficient depth for any ships.

The breadth of the channel, in its most contracted part, between Hare Island Bank and the Pilgrims, is 2 miles, and its greatest depths 7, 8, 10, to 13, 15, and 16 fathoms, mud, sand, and gravel.

Barrett Ledges.—The reef thus called is composed principally of two detached rocks. A *chequered black and white buoy* is moored in 6 fathoms on the North side of the West ledge, with the white diamond beacon on Hare Island in one with the East extreme of the Brandy Pots, and the summit of the southernmost mountain of the high land of Kamourasca in one with the South point of the Great Pilgrim Island.

The rocks of Barrett Ledges bear from each other N. 63° E. and S. 63° W. one-

the village and church of St. Roque. The country between is occupied with settlements, and an extensive mud-bank, with large scattered stones, uncovered at low water, extends in front of it. This mud-bank is included with the greater bank of sand called the *Shoals of St. Anne* and of *St. Roque*, extending more than a third over the river, from the southern shore, and limiting the channel on the South side. The St. Anne buoy is black, and moored on the north-western edge of these shoals in 2½ fathoms, with St. Anne church bearing S.E. ½ S., and Cape Diable open to the northward of St. Denis Point. All along the edge of the bank, from Kamourasca up to this buoy, there is excellent anchorage in from 7 to 10 fathoms, stiff mud bottom.

Opposite to Point Ouelle, on the North side of the river, is *Cape aux Oies*, or *Goose Cape*, which is bold and rocky, forming the western extremity of *Mal Bay*. *Point au Pies*, on the West of Murray Bay, 9½ miles N.E. ½ N. from Goose Cape, being the eastern extremity. *Mal Bay* is formed by a slight incurving of the coast; shoals extend a quarter of a mile off shore, and there is no good anchorage in it.

Cape Martin is 3 miles W. by S. from Cape aux Oies; between them is good anchorage, and about midway is a large stone, called *Grosse Rock*.

Vessels anchor in 7 fathoms, the *Grosse Rock* bearing N.W., being here sheltered from the tides, which run past Goose Cape with great rapidity, and occasion at times a strong rippling.

ISLE AUX COUDRES is opposite to Point St. Roque on the South shore; and at this part the navigation of the river upward becomes intricate, from the numerous banks and islands which form the Traverses and numerous other channels.

The island is 6 miles long and 2½ wide; its eastern end is 2½ miles S.W. from Cape Martin. The island, being cultivated, has a pleasing aspect; it has as many inhabitants as it can support, having been settled at an early period. Its South shore is lined with rocks and shoals, extending a mile out from it. Its North side is bold, and *Prairie Bay* affords excellent anchorage. There is a reef of rocks running off the N.W. of the island, which are all covered at high water. The bearings from the end of the ledge are St. Pierre Church in St. Paul's Bay just open, bearing N.W. ½ N.; *Cape Corbeau*, the East bluff of St. Paul's Bay, N.N.W. ½ W.; the waterfall on the North shore, N.N.E. ½ E.; the bluff point of the island, S.S.E.; and the N.E. bluff point of the same, off which is a reef of rocks, E. ½ N.

The NORTH CHANNEL to Quebec is on the North of Isle aux Coudres, and runs along the high northern shore of the river; and on the South side of it is the line of shoals, which extend from the West side of Isle aux Coudres to Burnt Cape Ledge and the Bayfield Isles.

The MIDDLE CHANNEL is to the South of the Isle aux Coudres, the entrance being between it and the Middle Ground, whence it runs westward along the shoals between it and the Seal Islands, and to the North of Goose and Canoe Islands, into the South Traverse.

The SOUTH TRAVERSE, that which is generally used by vessels at present, is along the South side of the river.

SOUTH TRAVERSE.—The entrance of the South Traverse lies between the black buoy, on the edge of St. Anne's Bank, on one side, and the bank called the Middle Ground on the other. The narrowest part of the channel is indicated by a lightvessel, stationed at nearly 5 miles W.S.W. from the black buoy of St. Anne's and which is to be left, on sailing upward, on the port or South side.

The Light Vessel is moored in about 3½ fathoms water on the N.E. point of the Shoals of St. Roque, nearly in the line from St. Roque Church to the N.E. end of Coudres Island; the former bearing S.S.E., 4½ miles, and the latter being distant 4½ miles. It exhibits two fixed white lights, which, in clear weather, should be seen from a distance of 9 miles. The beacon at St. Roque, open its own breadth to the westward of St. Roque Church, forms a cross mark for insuring the position of this lightvessel, the beacon being to the southward of the church. A bell is struck every five minutes on board the lightvessel in snow storms and foggy weather. Should

the vessel run adrift, this bell at her mast-head will be taken down, and she will only show *one* light till again in position.

Three *black buoys* are placed on the northern edge of the Shoals of St. Roque, making the southern edge of the South Traverse. They are moored in $2\frac{1}{2}$, $3\frac{1}{2}$, and 3 fathoms water, and at the distance of nearly 1, $2\frac{1}{2}$, and $4\frac{1}{2}$ miles respectively above the light vessel—the last buoy being on the S.W. point of the Shoals of St. Roque. The opposite or northern side of the Narrows is shown by the two *red buoys*, moored in $2\frac{1}{2}$ and 3 fathoms water on the southern side and S.W. end of the Middle Ground. It may, however, be useful to add here, that the *red buoy* on the S.W. end of the Middle Ground lies on the line of the Wood Pillar Island and Goose Island touching, and with the two beacons at St. Roque in one; the south-eastern-most beacon being diamond-shaped.

The passage between these buoys is only half a mile broad, and this is the most intricate part of the navigation in the river. The courses up from these buoys, are S.W. $\frac{1}{2}$ S. 4 miles, and S.W. by S. 2 miles, whence you enter the South Traverse, distinguished on the North side by the *Stone Pillar*, or *Pilier de Pierre*, and its lighthouse. It is a quarter of a mile in length, at $2\frac{1}{2}$ miles from the South shore.

Lighthouse.—A *revolving light* is shown from the tower, 38 feet high, on South or Stone Pillar, during the season of navigation. This light revolves at intervals of 1 $\frac{1}{2}$ minute, at 68 ft. above high water, seen 12 miles off.

About $2\frac{1}{2}$ miles north-westward of the Stone Pillar is a 3-fathom shoal, called the *Channel Patch*, marked by a *chequered black and white buoy*, lying in the mid-channel, and below it are several other patches, with from $2\frac{1}{2}$ to 3 fathoms. The marks for the Channel Patch, which may be passed on either side, are the North sides of the Goose Island Reef and of the Stone Pillar in one, bearing S.W. $\frac{1}{2}$ W., the latter being distant $2\frac{1}{2}$ miles; the North side of Goose Island (including the islands close off it) and the South side of the Wood Pillar in one, bearing S.W. by W. $\frac{1}{2}$ W.; and lastly St. Jean Church S.E. $\frac{1}{2}$ S. $2\frac{1}{2}$ miles.

The *Arignon* or *South Rock*, a half-tide rock, round on the top, and dry at three-quarters ebb, lies at the distance of 2 cables' lengths S.E. from the lighthouse on the South Pillar, with a depth of 7 fathoms close to it.

The Wood Pillar, or *Pilier Boisé*, a high round rock, with trees on the western part of it, lies at a mile and a quarter to the West of the Stone Pillar. At half a mile to the East of it is a rock, called the *Middle Rock*, dry at half-ebb.

To the northward of the Pillars or *Seal Reefs*, composed of sand and shingle on slate, and having an extent of nearly four miles N.E. by E. and S.W. by W. To a considerable extent the rocks which form these reefs are dry at low water. The bank on which they lie is extensive on the N.E. toward Coudre Island.

At a mile and a quarter S.W. from the *Pilier Boisé* lies the extremity of a reef, extending thence to *Goose Island*; and at a mile and a quarter S.W. $\frac{1}{2}$ W. from the Stone Pillar is the commencement of a ledge of high rocks, called the *Goose Island Reef*, extending thence $2\frac{1}{2}$ miles S.W. $\frac{1}{2}$ W., the western part of which is composed of rocks always above water, and steep to on their South side.

GOOSE ISLAND.—We have now advanced to *Goose Island*, connected by low meadow land to *Crane Island*, the whole of which occupies an extent of 10 miles in a direction N.E. $\frac{1}{2}$ E. and S.W. $\frac{1}{2}$ W. The South Traverse continues on the South side of this island; but is impeded by several shoals of 12 and 15 ft. water, which requires great precaution.

A farm-house may be seen on *Goose Island*, to the eastward of which, and close to low water mark, is a large rock called the *Hospital Rock*. Two miles and a half to the westward of this rock is a long reef, dry at low water, but it is out of the fairway, and close along the island.

The North side of *Crane Island* is in a good state of cultivation. On drawing toward it you will see a farm-house (Macpherson's) on the East end. To the S.E. at half a mile from this house, is the edge of the *Beaujeu Bank*, a narrow shoal which

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extends 2 miles thence to N.E. $\frac{1}{2}$ E., and having, on its shoalest part, only 12 ft. at low water.

Buoys.—The first *white buoy* is on the eastern end of the 24-fathoms patch, next eastward of the Beaujeu Bank, in 3 fathoms at low water, with the South side of Crane Island bearing S.W. by W. $\frac{1}{2}$ W., and the beacon on the meadows of Goose Island in one with the centre of Onion Island. The second *white buoy* is on the western end of the Beaujeu Bank, in 3 fathoms, with the lighthouse on the Stone Pillar appearing open two or three sails' breadth to the southward of Goose Island Reef, and the two white beacons on Crane Island in one.

Crane Island Lighthouse stands on the South coast at $1\frac{1}{2}$ mile from the West end of the island, and shows a *fixed light* at 44 ft., seen 10 miles off.

The buoys and light are of the greatest assistance to vessels passing to the southward of the Beaujeu Bank, whilst the channel to the northward of the bank is between them and two *red buoys*, which are placed as follows:—The easternmost *red buoy*, in 4 fathoms water, is moored on the edge of the Goose Island Shoal, with Onion Island seen over the meadows, bearing N.W., and the South side of Island S.W. $\frac{1}{2}$ W. The eastern entrance of the channel to the northward of the Beaujeu Bank, between this buoy and the easternmost white buoy, is half a mile wide, with 9 or 10 fathoms water in it, but the depth decreases to $4\frac{1}{2}$ fathoms in the western entrance, which is only about 2 cables wide, from the depth of 5 fathoms to 3 fathoms. A second *red buoy* on the shoal, which extends 3 cables out from the high-water mark of Crane Island, marks the northern side of this narrow entrance, which is between it and the white buoy on the western end of the Beaujeu Bank. The marks for this second red buoy are, St. Ignace Church touching the eastern side of the peninsula of Cape St. Ignace, and Macpherson House bearing N. $\frac{1}{2}$ E.

On the South shore, opposite to the N.E. end of Goose Island, are the settlement and church of *L'Islet*, with a landing pier, 1,200 ft. long, and 8 $\frac{1}{2}$ ft. water at its head, and at 7 miles higher are the cape and village of *St. Ignace*; between are numerous settlements, and a shoal bank extends along shore, which is a mile and a half in breadth, thus narrowing the channel-way to the breadth of a mile.

BAYFIELD ISLES.—To the West of Crane Island is a group which may, with strict propriety, be called the *Bayfield Isles*, in compliment to the gentleman by whom they have been so excellently surveyed. Exclusive of a number of smaller islets and rocks, the principal isles are, *Canoe Isle*, on the North side of Crane Island, *Marguerite* or *Margaret* to the West, *Grosse Isle*, and *Ile aux Reaux*, otherwise Rat Island, and the *Isle Madame*. The whole, between Crane Island and the Island of Orleans, occupies an extent of 14 miles. There are several passages between the isles, but they are too intricate to be understood without reference to the chart.

From the West end of Crane Island a reef of rocks extends to the W.S.W. about half a mile, and a spit of sand, of 9 to 12 ft. water, a mile and a quarter thence, in the same direction. From the S.W. side of Margaret Isle there is likewise a bank extending in a S.W. direction, the extremity of which is marked by a *red buoy*. On the North side of this island is a good roadstead, with 8 fathoms of water, lying about a mile to the East of Grosse Isle. You enter from the southward with the red buoy above mentioned on the starboard, and a white buoy, three quarters of a mile further North, on the port side; the course in being N. by E.

For the guidance of the numerous vessels which stop there, a *red buoy* has been placed on the S.W. end of Margaret's Tail, as mentioned above, and a *white buoy* on the N.E. end of Grosse Patch; but in the absence of the buoys, the East points of Grosse Island and the Brothers in one, bearing N. by E., will lead through the channel between them; whence a vessel may either haul to the eastward between Grosse and Cliff Islands, or to the westward between Grosse Patch and Grosse Island, as may be preferred. In the latter case care must be taken to avoid a small rock, with 7 ft. least water, on the North side of which a *chequered buoy* has been placed; This rock lies about 560 yards N.W. by W. from the *white buoy*, at the N.E. end of Grosse Patch; and about 360 yards off the shore of Grosse Island at high water.

Grosse Isle, which has a farm near its N.E. end, is about 150 ft. in height; and the next isle, *Reaux*, which is long, narrow, low, and covered with trees, has one near its West end. Off this island, as the law now stands, ships are obliged to anchor; from whence, after examination, they are allowed to proceed to Quebec, if not detained at the quarantine anchorage. It has a large landing pier which reaches into 16 ft. water. The *Isle Madame* is also low, covered with trees, and has only one habitation. The last two isles are wholly on a base of rock, and from the S.W. end of Madame the bank extends $2\frac{1}{2}$ miles to the S.W., and thus forms the western entrance of the *Northern Traverse*, on the eastern side of the island of Orleans. A red buoy is placed on the West end of the reef in 5½ fathoms, with St. Vallier Church S. $\frac{1}{2}$ E., and a house on the West end of *Reaux Island* just open North of the same island. A ship should not approach it nearer than in 7 or 8 fathoms.

On the SOUTHERN LAND, above the Beaujeu Bank, will be seen, in succession, the churches of St. Ignace, St. Thomas, Berthier, St. Vallier, St. Michael, and Beaumont. A large tract, in the vicinity of the *Rivière du Sud*, is in so high a state of improvement, as to be considered as the granary of the province. The western side of this river is distinguished by the respectable village of *St. Thomas*, and the country about it is very fine, exhibiting churches and villages; the houses, being generally whitened, are pleasingly contrasted by the dark thick wood on the rising grounds behind them, the boundary of view beyond which is a distant range of lofty mountains.

From the land of St. Thomas a bank extends more than half-way over toward Crane Island. Its northern extremity is a mile and a half S.W. by W. from the South point of the island. The bank is partly dry at low water.

The WYE ROCK lies immediately above the bank of St. Thomas. This reef is about one quarter of a mile in length, in the direction of S.W. by W. It has only 3 ft. over its West end, and 6 ft. over the East end. The West end lies with the *Seminaire* of St. Joachim, a large building, with a tinned cupola and cross, on a rising ground near the water; on the North side of the river, just shut in with the East end of *Reaux Island*, and bearing N. 50° W. Its distance from the nearest shore is rather more than half a mile.

Lighthouse.—On the *South Shore*, at $6\frac{1}{2}$ miles above the Wye Rock, and W.N.W. from Berthier Church, lie the *Belle Chasse Islets*, two remarkable large rocks. They are situate three-quarters of a mile from the shore. The lighthouse stands on the E. end of *Belle Chasse Island*, showing a *fixed light* at 70 ft., visible 12 miles off.

ST. VALLIER CHURCH bears from that of St. Jean, or St. John, on the island of Orleans. S.E., distant about 3 miles. The ground, all the way up from St. Vallier Point to Quebec, is foul and unfit for anchoring.

The BEAUMONT REEF, opposite to the Point of St. Laurent on the island of Orleans, is a large rocky bank, extending more than half-way over from the South shore. It is dry at low water, uneven, and steep-to on the North side, having 14 fathoms close to it.

The MIDDLE CHANNEL lies between the shoals and islands which form the northern side of the South Channel, and the long line of shoals and reefs, which extend from Coudres Island to *Reaux Island*, at the East end of the island of Orleans. The entrance of the *Middle Traverse*, to the North of the Seal Islands, has not more than 3 fathoms at low water; but having passed this shallow part, there is depth and room enough for the largest ships, until we arrive at the Bayfield Islands, where the *Middle Traverse* communicates with the *South Traverse* by various narrow passages between the islands. There is plenty of water at all times in most of these passages, which will be best understood by referring to the chart, but the tides set strongly through them; and though it would be possible to take even the largest ships up to Quebec by the Middle Channel, were it requisite from any cause to do so, yet they are too intricate and difficult for general navigation.

The NORTH CHANNEL is a fine channel, and although not so convenient for the purposes of navigation as the South Channel, which is well lighted, and is the most generally used, still it may be of service at times, as it frequently remains open

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The western entrance to this channel is between the reefs, which extend a mile to the E.N.E. of the N.E. of Coudres Island and the coast at *Les Eboulements* (land-slips), where there is a large settlement. The mark to clear the shoals, on each side this part of the channel, is Cape Goose and Cape Martin in one. There is a landing pier at *Les Eboulements*, 920 ft. long, and another in *Malbaie*, reaching into 18 ft. water.

ST. PAUL'S BAY is opposite the West end of Coudres Island. It is shoal and rocky, with a great ripple at some distance off, around Cape Corbeau. Its western point is called *Cap de la Baie*, and shoals of mud and large stones extend off it for three-quarters of a mile, and which also extend for $1\frac{1}{2}$ miles to the south-westward at an equal distance.

After clearing the N.W. reef of Coudres Island by the before-mentioned marks, there is a fine straight channel from $1\frac{1}{2}$ to 2 miles broad, entirely free from danger, and extending 18 or 19 miles to the Burnt Cape Ledge. The depth does not exceed 17 fathoms, and there is good anchorage towards the sides, out of the strength of the tides, which run stronger and with more sea in this long and open reach than in the South Channel.

The southern side of this channel is a bank, extending, as before mentioned, from Coudres Island to Burnt Cape Ledge. Its edge is nearly straight, and is easily followed.

The *Neptune Rock* is nearly 15 miles S.W. from Coudres Island, within the edge of this southern shoal, and is easily recognised.

The *North Shore* is high, but the shoals extending three-quarters of a mile from *Cap de la Baie* and *Petit Rivière* will be cleared by keeping the extreme western capes, *Rouge* and *Gribanne*, open to the southward of Cape Maillard, which is 3 miles S.W. of the Church of *Petit Rivière*. *Abattis* is a landing, $1\frac{1}{2}$ mile S.W. of Cape Maillard; and at the *Sault au Cochon*, 2 miles farther S.W., the shoals which line the shore cease. At 8 miles beyond *Abattis* Cove a light is shown on Cape *Rouge*. The arc illuminated is East southward to S.W. Position $47^{\circ} 7' 20''$ N., $70^{\circ} 42' 45''$ W. There is only one landing place, *La Gribanne*, between *Abattis* and Cape *Tourmente*, a distance of 11 miles. To the westward of the *Sault au Cochon* the mountainous and uninhabited coast is quite bold, the high and precipitous capes, of various granitic rocks, being washed by the river as far as Cape *Tourmente*, where the *Seminaire Bank* commences, and the mountains trend to the N.W. away from the shore.

Burnt Cape Ledge is nearly opposite Cape *Brulé* on the North shore, from which it is distant $1\frac{1}{2}$ mile. The S.W. end is always above water, and is $4\frac{1}{2}$ miles S.W. from the *Neptune Rock*.

The *Brulé Banks* are to the westward of the former, and are joined to it by shoal water. Their northern edge is only 600 fathoms wide, and from 7 to 10 deep. The banks form a bay on the South side, but which has no passage through to westward. This must be taken care of, and the North shore of Capes *Brulé* and *Tourmente* kept on board on nearing them. On the N.E. point of the *Brulé Banks*, which has extended to the East, a black buoy lies in 3 fathoms, with the West end of Two Heads Island and the West end of *Burnt Cape Ledge* in one S. $\frac{1}{2}$ E., and Cape *Tourmente* W.S.W.

The *Traverse Spit* lies between the *Brulé Banks* and the eastern point of *Orleans Island*, its N.E. part forming, with the S.W. part of the *Brulé Banks*, the *Eastern Narrows of the North Traverse*, which is only 250 fathoms wide, and 4 fathoms can be carried through within this breadth. The *Traverse Spit*, and the *Horse Shoes bank* to the N.W. of it, as well as the *Brulé Banks*, dry for the most part soon after half-ebb, and thereby greatly lessen the difficulty of the passage.

As the leading marks can only be made out in fine weather, and by experienced eyes, it required buoying to render it safe for large vessels. The cross mark for the eastern entrance of this passage, and for the N.E. extreme of the *Traverse Spit*, is the S.W. point of Two Heads Island on with a distant blue hill, bearing S.E. by

G. & R. of St. Lawrence.

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E. $\frac{3}{4}$ E.; the N.E. end of Margaret Island being at the same time just open to the westward of Two Heads Island. On the last named mark a *red buoy* is moored in 3 fathoms; and on the N.E. end of the Traverso Spit, and opposite to it, on the N.W. side of Brulé Bank, a *black buoy* is moored in the same depth of water, and with the East end of Margaret Island and West end of Two Heads Island touching, bearing S.E. by E. $\frac{1}{2}$ E.

The mark for leading into the Traverse through the Eastern Narrows between the buoys, is the S.W. point of Reaux Island and Point St. Vallier in one, bearing S.S.W. $\frac{3}{4}$ W. From the Eastern Narrows the channel runs S.W. by W. close along the southern edge of the Traverse Spit, leaving all other shoals to the southward.

At the distance of $2\frac{1}{2}$ miles we come to the *Western Narrows*, which are also 250 fathoms wide and $4\frac{1}{2}$ fathoms deep. The Western Narrows are between the Traverse Spit and the *West Sand*, which is $1\frac{1}{2}$ mile long and has 7 feet least water.

On the East end of the West Sand, where a *chequered black and white buoy* is moored in 3 fathoms, Berthier Church is just shut in behind the S.W. point of Reaux Island, bearing S. $\frac{1}{2}$ W.; and Patience Island and Two Heads Island are touching, E. $\frac{1}{2}$ S.; and the mark for leading clear of this sand, at the distance of 2 cables to the N.E., is Reaux and Grosse Islands touching S.E. by E. The West end of the same Sand is cleared by the line of Joachim Church and the East end of Orleans in one.

The mark for leading through the Western Narrows, after having arrived as far as the East end of the West Sand (which will be when Berthier Church is just shut in behind the S.W. point of Reaux Island, bearing S. $\frac{1}{2}$ W.), is *Point St. John* and *Point Dauphine*, on the South side of Orleans Island, in one, bearing S.W. $\frac{1}{2}$ W.

Having cleared the Western Narrows, there is a fine clear passage between Orleans Island and the banks of Madame Island, not less than two-thirds of a mile wide, and with good anchorage all the way to the South Channel at Point St. John, a distance of nearly 7 miles.

The channel to the *northward* of the Island of Orleans has water enough for the largest ships, but is too narrow and intricate for general use.

THE ISLAND OF ORLEANS is distinguished for its fertility. The shores, in general, slant gradually to the beach; in some places are a few rocky cliffs, but not of great extent or elevation; from the foot of the slopes are large spaces of low meadow land, sometimes intersected by patches of excellent arable. Bordering the North channel the beach is flat and muddy, with reefs of rocks running along it; but on the southern side it is a fine sand, with only a few pointed rocks sticking up here and there. The highest part of the island is by the church of St. Pierre, about $3\frac{1}{2}$ miles from the western extremity, and almost fronting the magnificent Falls of Montmorenci; and also just above Patrick's Hole, on the South side, nearly abreast of St. Pierre, on which is placed the second telegraph of a chain between Quebec and the quarantine establishment at Grosse Island. The central part is thickly wooded. The churches of St. Lawrence and St. John are situated close down on the southern shore; the distance between them is nearly 6 miles, and this extent presents excellent cultivated lands, richly diversified with orchards and gardens, and houses at short intervals from each other.

Lighthouse.—A *fixed light* is shown from a white building at St. Lawrence, opposite to Beaumont. It is elevated 38 ft.

St. Patrick's Hole, a little to the westward of St. Lawrence, is a safe and well-sheltered cove, where vessels outward-bound usually come to an anchor, to await their final instructions for sailing. On the West point of it is a group of very neat houses, at several of which the inhabitants furnish accommodations to the numerous persons who visit the island, from amusement, or from curiosity, both in summer and winter.

Off *St. Patrick's Hole*, above mentioned, ships ride in 10, 12, or 14 fathoms, abreast of the inlet. The telegraph, No. 2, is just to the eastward of this cove, on the high part of the island. The ground is not good, but it is well sheltered from

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easterly winds. Here the river is about 1 mile and a quarter wide, and bold on both sides.

At about half-way between St. Patrick's Hole and the West end of Orleans, is a shelf called MORANDAN'S ROCKS. They extend a cable's length from the island, and have only 10 ft. over them.

On the S.W. part of the West end of Orleans is another reef; this is dry at low water, lies close in, and should not be approached nearer than in 10 fathoms. On the opposite shore, a little to the eastward of Point Levy, is another reef, which should be passed at the same depth. Northward of Point Levy is a small reef, but close in, and out of the fairway.

BASIN OF QUEBEC.—The appearance of the lands forming the Basin of Quebec is given hereafter, in the description of the river, from Montreal downward. We therefore only add here, that it is 1 mile across between the high-water marks, with a great depth of water. The *Harbour of Quebec*, properly so called, commences at St. Patrick's Hole, and extends thence to Cape Rouge River, which is nearly 3 leagues above Quebec. The *Port of Quebec* comprehends all the space between Barnaby Island and the rapid above Montreal.

The situation of Quebec, the capital of Lower Canada, is unusually grand and majestic, in form of an amphitheatre. The city is seated on the NW. side of the St. Lawrence, upon a promontory, formed by that river and the St. Charles. The extremity of this headland is called *Cape Diamond*, of which the highest point rises 345 ft. above the level of the water. It is composed of a rock of grey granite, mixed with quartz crystals (from which it obtains its name), and a species of dark coloured slate. In many places it is quite perpendicular and bare; in others, where the acclivity is less abrupt, there are patches of brownish earth, or rather a decomposition of the softer parts of the stone, on which a few stunted pines and creeping shrubs are here and there seen; but the general aspect of it is rugged and barren.—(*Bouchette*, Vol. i., 241.)

The latitude of Quebec is $46^{\circ} 48' 9''$, and its longitude we assume as $71^{\circ} 12' 32''$, from the reasons assigned in the "Memoir on the North Atlantic Ocean."

TIDES IN THE RIVER ST. LAWRENCE.

On the days of full and change the tide flows in the river as follows:—Near Cape de Monts, on the North side, at $1^h 55^m$. In Manicougan Bay, at 2^h ; here spring-tides rise 12, and neaps 8 ft. At Bersimis Point, 2^h .

On the South coast, near Cape Chatte, the time is $1^h 3^h$. Here spring tides rise from 12 to 14, and neaps 8 ft. Off the River Matane the time is $2^h 0^m$; springs rise 12, and neaps 6 ft. At Grand Metis Bay, the time is $2^h 10^m$; springs rise 13, and neaps 8 ft. Off shore hereabout the current on the surface always runs downward, from $1\frac{1}{2}$ to $2\frac{1}{2}$ knots.

The time of high water at Green Island is 3^h ; spring tides rise 16, and neaps 10 feet. In the middle of the river, off the eastern part of this island, the flood from the North shore turns to the southward and sets thence eastward off the South shore; and thus below the Isle Bic the stream sets constantly downward, at the rate of $1\frac{1}{2}$ to $2\frac{1}{2}$ knots as above mentioned.

At Green Island the time is $2^h 45^m$; at Kamourasea, 4^h ; at the Brandy Pots, 3^h , in the Traverse, $4^h 30^m$. Off Point St. Roch or Roque, $4^h 50^m$. Here it ebbs $6\frac{1}{2}$ hours; and flows $5\frac{1}{2}$.

At the ISLE BIC the stream never bends to the westward until an hour's flood by the shore. The neap floods are here very weak, and, with westerly winds, none are perceptible. A spring flood is, however, always found, within 4 miles of the shore, between Father Point and Bic.

The ebb stream from the River Saguenay sets with great force south-westward

toward Red Island Bank. Off Green Island, on the opposite side, there is little or no flood, but a great ripple.

All the way hence to Quebec, the tide, when regular, flows tide and quarter-tide; but it is influenced greatly by the wind, and by no means to be depended on, as to its running, anywhere below Hare Island, where there is a regular stream of ebb and flood.

Between BARNABY AND BIC the stream of flood sets in from the N.E. at the rate of about 2 knots; then fair through the channel until last quarter flood, when it sets to the N.W. by the West end of Bic, and then gradually to the N.E. as the flood slackens. The whole of the ebb, both to the eastward and westward of the island, sets strongly to the N.E.

The current between Bicquette and the North coast is generally very strong to the N.E., without any regular change. In the summer and autumn, as well as in spring tides, this current slackens, and, near Bicquette, runs to the westward, during flood; but, until the upland waters have all run down, and the great rivers have discharged the freshes, caused by the thawing of the snows in the spring of the year, this current always runs downward.

From Bic to Green Island, on the southern side, the stream of flood is nowhere perceptible at a mile and a half from the islands. The ebb, or rather current, comes strongly from the N.W., out of the River Saguenay, and through the channel to the northward of Red Island, and joining the eddy-flood, before explained, increases the constantly downward course of the stream. Here it always runs in a S.E. direction, 2 miles an hour, with a westerly wind; but only so to the southward and eastward of Red Island. Between Red Island and Green Island the ebb runs from 4 to 6½ knots. In crossing over to the North shore, this easterly current will be found to diminish; for, on the North side, the flood is pretty regular, and the ebb much weaker.

Eastward of the Razade Rocks, and near Bic, the eddy flood assumes a N.E. direction, and sets strongly between Bic and Bicquette. To the southward of Bic, spring floods run at the rate of a knot and a half; neaps are not perceptible. Ships that come to the southward of Bic, with a scant wind from the northward, must steer W. by N. to check the S.E. current, until they come into 18 fathoms of water, or up to Basque, whence they proceed for Green Island.

The first of the flood, spring tides, sets from the N.E. along the North side of Green Island, and strongly toward the West end of it; then S.S.W. over the reef toward Cacona. In the middle of the channel no flood is perceptible. During spring ebbs the meeting of the N.E. and S.E. tides, near the middle of Green Island, causes very strong rippings; and, to the eastward of Green Island, the S.E. ebb comes strongly about the East end of Red Island; here meeting, the N.E. tide causes a high rippling, much like broken water in strong easterly winds; but in neap tides the floods are very weak, and in the spring of the year there are none. This renders the part of the river now under notice more tedious in its navigation than any other, unless with a fair wind.

From the West end of Green Island a regular stream of flood and ebb commences, which runs 5 hours upward and 7 downward. At the Brandy Pots it flows tide and quarter-tide; and above the Percée Rocks, on the South shore, it sets regularly up and down, N.E. by E. and S.W. by W.

From the Brandy Pots the stream of flood sets toward Hare Island; and near the West and N.W. with great strength, through the passage between the island and bank.

Above Hare Island the flood sets regularly up the river. The ebbs contrarywise.

From the *Pilgrims* up to Cape Diable the flood is very weak, but it thence increases up to the buoys of the Traverse, where it runs at the rate of 6 knots. The first of the ebb sets towards the English Bank and Hare Island Shoal, when abreast of the greater island of Kamourasca, and the ebb contrary.

In *La Prairie Bay*, on the North side of the *Isle aux Coudres*, the time of high water is 4^h 25^m, and here it flows six hours; the ebb stream continues an hour and a

quarter after low water, and the flood three-quarters of an hour after high water. The tides in the North Channel being half an hour earlier than in the Southern Channels, the first of the flood sets strongly on the St. Roque and St. Anne's Banks; and the first of the ebb sets strongly across the shoals in the middle of the river. In the Traverse spring tides rise 18, neaps 11 ft.

In the *South Traverse*, on the full and change, the tide on-shore flows at half-past four, but it continues to run to the westward until six o'clock, when regular in the channel. With westerly winds there is a deviation, but it is certain that the tide on-shore rises 3 ft. before the stream bends to the westward; and this allowance must always be made in every part of the river.

In the Traverse, the first of the flood sets from the N.N.E.; at the buoys, at a quarter flood, it takes a S.W. direction, and, when the shoals are covered at half-flood, at the Seal Reefs, it sets until high water S.W. by W. The ebbs, in a contrary direction, run with great strength—frequently, in the spring of the year, at the rate of 6 or 7 knots.

Between the Piliers or Pillars, it is high water at 5^h 0^m. The ebb here runs 6 hours and 50 minutes; the flood, 5 hours and 25 minutes. Both streams continue to run an hour after high and low water by the shore.

From Crane Island the flood sets fair up the river, but the first of the ebb off L'Islet sets to the northward for half an hour, then fair down the river, and at the rate of not more than 3½ knots in spring tide.

At the Isle aux Reaux, or Rat Isle, below Orleans Island, it is high water at 5^h 32^m. It ebbs by the shore seven hours, and flows five and a half. The streams run an hour later. On the S.W. end of Madame Island it is high water at 5^h 40^m; springs rise 17, and neaps 13 ft.

At Quebec the time of high water is 6^h 37^m. Here it ebbs by the shore seven hours and 40 minutes, and flows four hours and 45 minutes. Both streams run an hour after high and low water by the shore. Springs rise 18, and neaps 13 ft.

DIRECTIONS FOR SAILING UP THE RIVER, FROM ANTICOSTI TO QUEBEC.

Between the S.W. point of Anticosti and the coast of the district of Gaspé, the current from the river sets continually down to the south-eastward. In the spring of the year it is strongest; this is supposed to be owing to the vast quantity of snow which thaws at that time. In the summer, when the smaller rivers have lost their freshes, this current is estimated at the general rate of 2 miles an hour; but in the spring its rate has amounted to 3½; which, of course, varies according to the quantity of snow, &c. Mr. Lambly says that there is a difference of 2 and 3 ft. in the level of the River St. Lawrence, between the months of May and August; which he imputes to the quantity of ice and snow melted in the spring.

Those advancing toward the river, in the fairway between the S.W. point of Anticosti and Cape Rosier, with the wind from the North or N. by E., if ignorant of the current, may think that they are making a reach up, when really approaching the South shore. This is to be guarded against, particularly during a long night, or in dark and thick weather. It is always best to tack in time, and get out of the strength of the current, which will be found to diminish toward the North coast.

In coming up with *contrary winds*, and being far enough to the westward to weather Anticosti, stand to the northward, and keep within 3 or 4 leagues of the land up to the extremity of the Cape de Monts. Here the lighthouse, described on p. 121, will be found extremely useful. The land is all bold, and the tide along it favourable. After getting up to Trinity Cove, or the coast to the N.E. of the cape, the flood will be found setting along the North shore.

Should circumstances render it necessary, you may proceed to and take shelter at,

the entrance of the *Harbour of St. Nicholas*, already described, which lies W. by N. 5 leagues from Cape de Monte.

Abreast of *Manicougan Shoals*, at about two-thirds of the channel over from the southward, a strong rippling has frequently been found; at about 2 miles further North, another; and at 2 miles more a similar one. These are visible only in fine weather, and are supposed to be caused by the slack of the eastern current, which runs down on the South shore, and the regular flood on the North. In this part no bottom is to be found. Toward the *Points of Bersimis* and *Mille Vaches*, the same appearances may occasionally be found, but there is no danger, it being merely the conflict of the two streams.

In proceeding upward, with *contrary winds*, a ship should continue to keep over toward the North shore, but taking especial care to avoid the Manicougan and Bersimis Shoals. Thus she will avoid the current setting strongly down the middle of the river, and have the assistance of the flood tide, which is not felt hereabout on the South shore.

The current is sometimes strong to the N.E. between Bicquette and Mille Vaches.

If a ship has advanced up, on the North side, to Bersimis Point, with the wind at West, and a flood tide, she may cross over to Father Point, and obtain a pilot. Should the wind change to S.W. by W., keep the North land on board, until sure of fetching the point.

With a *fair wind*, and under favourable circumstances, a ship proceeding upward, on the *South side* of the river, may find soundings, but very irregular, along the coast to Matane; the shore is, in general, steep. No anchorage in any part; the depth 20, 30, and 50 fathoms, at 1 mile from the rock, and all hard ground; in from 50 to 80 fathoms the bottom is of clean sand.

From CAPE CHATTE to Matane the course and distance are W. $\frac{1}{2}$ S. $10\frac{1}{2}$ leagues. When at 4 miles to the north-eastward of Matane you will see the Paps bearing S.W. $\frac{1}{2}$ W.; they stand inland to the westward of the river, as already noticed, and this is the best bearing on which they can be seen. Mount Camille will now come in sight to the W.S.W., and may be seen in this direction 13 leagues off. It hence appears to the northward of all the land on the South side, and in the form of a circular island.

Twenty-three miles W. $\frac{1}{2}$ S. of Matane River is *Little Metis Cove*, described on page 126. If requisite to anchor here, give the East end of the reef a berth of 100 yards, or cross it in 3 fathoms; then haul up into the middle of the cove, and let go.

GRAND METIS, described on page 126, is $5\frac{1}{2}$ miles W. $\frac{1}{2}$ S. from Little Metis. The bank of soundings extends further to the northward of these coves than off Matane, and 35 fathoms, with sand, may be found at 4 miles from shore; but beyond this the depths speedily increase to 60 and 70 fathoms. The edge of the bank continues steep as high up as Green Island. Along-shore, within 10 fathoms, the ground is hard, and it is difficult for a boat to land, unless in fine weather. From Grand Metis to Cock Cove, as already shown, page 127, the land trends W. by S. 10 miles. In fine weather ships may stop tide between, in 15 fathoms.

FATHER POINT, or POINT AUX PÈRES, with its *light*, has been already described, as well as Barnaby Island, which lies to the westward of it (see page 127). Small vessels, seeking shelter from westerly winds, may find a depth of 3 fathoms, under the reef extending from the East end of this island in *Rimousky Road*. Upon this reef is a large round stone, which serves as a mark. To enter, cross the tail of the reef in 4 fathoms, and then haul to the southward; and, when the island bears W. by N., with the large stone N.W. by W., anchor at a quarter of a mile from the island.

From *Barnaby Island* the Isle Bic bears West 10 miles; Bicquette W. by N. $11\frac{1}{2}$ miles; and Cape Original W.S.W. $\frac{3}{4}$ W. $3\frac{1}{2}$ leagues. Cape Original and the end of Bic lie North and South from each other, distant $2\frac{3}{4}$ miles. The cape bears from Bic Old Harbour nearly West, about $2\frac{1}{2}$ miles. From the cape a reef extends East 1 mile.

The eastern part of this reef and the western point of the harbour, in a line, bear E.S.E. 1 mile.

SOUNDINGS, &c., between COCK COVE and BIC ISLAND.—From Father Point the bank extends northward 5 miles. At that distance from land are 35 fathoms of water, with sand and mud. Hence, westward, all the way within 1 mile of Bicquette, the soundings are very regular. Ships may therefore stand to the southward by the lead, and tack at pleasure. They may also stop tide anywhere in this extent, in 9 or 10 fathoms, good ground.

If a ship arrives off Father Point, during an easterly wind and clear weather, when no pilots are to be obtained, she may safely proceed along the land in 10 fathoms of water. On approaching the Isle Bic the reef extending from the S.E. of that island will be seen; give this a berth, and continue onward through the middle of the channel between the island and Cape Original. With the body of the island N.E. you may come to an anchor, in 8 or 9 fathoms, clean ground, and wait for a pilot. There is a spot on the island cleared from trees; when this spot bears N.E., from a depth of 11 or 12 fathoms, you will be in a good berth. The ground is hard toward the island.

The pilots repair to their rendezvous in April. On their boats and sails are their respective numbers. The proper rendezvous is at Father Point; but they are often met with at Matane and Cape Chatte, and sometimes lower down.

A ship off Father Point, during *thick weather* and an easterly wind, without a pilot, may stand to the southward by the lead, and tack by *sofading*. In this case observe that, when in 10 fathoms, Bic will bear due West.

To BEAT up from Father Point to Bic Island, you may make free with the South shore, as, by nearing it, the flood tide will be most in your favour. The depth of 7 fathoms is a good fairway, and you may anchor in that depth all the way up to the island. When beating in, to the southward of Bic, from the eastward, stand to the southward into 7 fathoms while to the eastward of the island, but approach no nearer to the S.E. reef than 9 fathoms. In the middle are 12 fathoms. In standing to the northward, toward Bic, tack in 10 fathoms all along the island, and when it bears N.E. anchor as above.

THE GENERAL COURSES, Etc., BETWEEN CAPE CHATTE AND ISLE BIC, ARE AS FOLLOW:—

A ship bound upward, and having arrived within 3 leagues to the N.E. of Cape Chatte, on which is to be placed a light, should steer W. by S. or according to the wind, allowing for current to S.E., as already shown. Running thus for 24 leagues, will bring you to Father Point. Should the weather be thick, you may haul to the southward; and if, after gaining soundings in from 30 to 25 fathoms, the water should suddenly shoalen to 20 and 15, you will not be up to the point, but may safely run 4 or 5 miles higher; with soundings, and the water gradually shoaling from 33 to 25, 18, &c., in 3 or 4 miles, you will be up with the point, and may make signal for a pilot, approaching no nearer than in 12 fathoms. Here you will be about 1 mile and a half from shore, and will, if the weather be clear, see the houses. The shore is bold-to, and may be approached with safety. From Father Point to the Isle Bic the bearing and distance are W. $\frac{1}{2}$ S. 16 miles.

While advancing from the eastward toward Father Point, and being off Little Metis, the high land to the southward of Cape Arignole, or Original, may be seen before the cape itself or Isle Bic come in sight. From off Mount Camille, in clear weather, Bic may be clearly seen. To avoid mistaking Barnaby Isle for that of Bic, observe that, in thick weather, a ship cannot approach the land, near Father Point, without gradually shoaling the water; consequently if, while keeping the lead going you come into 9 fathoms, and make an island suddenly, it must be Barnaby; or, if

falling in with an island on any bearing to the westward of W.S.W., one east of the lead will be sufficient to ascertain which it is; for, with Barnaby from W.S.W. to West, you will have from 7 to 5 fathoms only; but with Bic on the same bearings are from 15 to 12 fathoms.

If, with the lead kept going, and no soundings be found, you suddenly fall in with an island to the southward, it must be Biquette. With this island S.W. half a mile, there are 16 fathoms of water. At 2 miles East from it are 16 fathoms, and a ship advancing into this depth, from the deeper water, may either haul off to the northward, and wait for clear weather, or proceed, by sounding around the reef from the East end of Bic; steer thence West 2 miles, and come to an anchor, within the island, in 12 or 11 fathoms. At 4 miles North of Biquette are 50 fathoms of water.

With an *easterly* wind, if requisite to anchor on the South side of Bic, to proceed from windward, run boldly to the southward, and look out for the reef extending from the East end of the island. The latter may be seen, being always above water. Give the reef a berth of a quarter of a mile, and run along, in mid-channel, until Cape Original bears S.S.E., the body of the island then bearing N.N.W. In 10 or 11 fathoms is a large ship's berth, the ground clear and good. Small vessels may run up, until the island bears N.E. in 9 fathoms, at about a quarter of a mile from the island; but here the ground is not so clear as in the deeper water. Fresh water is obtainable in the cove just to the westward of the East end of the island.

If, during a *westerly* wind, a ship should be to the windward of the island, and it be required to bear up, in order to anchor, stand to the southward, in 11 fathoms; then run down and anchor, as above directed; but particularly noticing that, with little wind, 10 fathoms is the proper depth of the fairway, and that the last quarter flood, and all the ebb, sets strongly between Biquette and Bic.

Should you, with the wind *easterly*, be too far to the westward to fetch round the East end of Bic, in order to gain the anchorage, give Biquette a berth of half a mile, then run up until the West end of Bic bears S.E., when Cape Original will be open of it. The latter mark leads to the westward of a reef that covers at a quarter-tide, and extends W.S.W. 1 mile from Biquette. Another reef, always in sight, lies between the former and Biquette. By hauling round to the southward, with Cape Original open, you will pass athwart the opening between Bic and Biquette, in from 16 to 12, 10, and 9 fathoms; the water thence shoals into 6 fathoms, on the spit of mud and sand lying S.W. by W. from Bic, 1 mile. After crossing this spit, you will deepen into 9 and 10 fathoms, when the passage will be open, and you may come to an anchor.

The N.W. ledge of Bic, the West end of that isle, and Cape Original, are nearly in a line when bearing S.E. When beating into Bic from the westward, while standing to the southward, do not shut Mount Camille with Cape Original; in standing to the northward, do not shut Mount Camille with the Isle Bic.

BANK OF SOUNDINGS.—In the offing between Barnaby and Bic, are regular soundings, decreasing from 35 to 30 fathoms, generally of clean ground. Ships may, therefore, anchor in any depth, but no nearer than a mile and a half, with Bic bearing from W.S.W., as otherwise, the channel on the South of that island will not be open; and, with a sudden shift of wind, you may not be able to quit the island.

At N.W. from the eastern extremity of the S.E. reef of Bic, and just to the southward of the stream of Biquette, is the *N.E. reef*, a dangerous ledge, seen at low-water, spring tides only. To avoid it, give Bic the berth of a mile. Westward of Bic the edge of the Bank of Soundings trends to the south-westward up to Basque Isle, and ships may therefore stand safely to the southward by the lead, 12 fathoms being the fairway.

ISLE BIC TO GREEN ISLAND.—From the Isle Bic Green Island bears S.W. by W. $\frac{3}{4}$ W. $9\frac{1}{2}$ leagues; and the course will therefore be from W.S.W. to S.W., according to the distance northward from Bic, &c. In this course and distance, you

pass the Alcides Rock, the Razades, Basque, and Apple Island, which have been described in pp. 128, 129. From the rocks of Apple Island to the eastern reef of Green Island, the bearing and distance are W. by S. 2 miles. The reef extends nearly a mile from the trees on the East end of Green Island, and is always uncovered. The small channel on the South side of Green Island is nearly dry at low water.

The edge of the bank is steep to the northward of the Razades, &c., but from 35 fathoms, inward, there are gradual soundings. Between Bic and Green Island there is anchorage all the way in 15 fathoms; and for small vessels, in fine weather, in 9 fathoms. If up to the East end of Green Island, and the tide be done, you may anchor in 10 fathoms off the reef, and in the stream of the ledge extending N.E. by N. from the lighthouse point, at the distance of a mile from the extremity of that shoal.

Between Bic and Basque the ground is all clean; but thence to Green Island it is foul. A small vessel may find shelter under the East end of Basque, in $2\frac{1}{2}$ fathoms at low water, giving the East end of the reef extending from that island the berth of a quarter of a mile. The anchorage is with the island bearing W. by S.

The lighthouse and reefs about Green Island have been already described in p. 129. The lighthouse bearing S.W. by W. leads safely up to Green Island. The land to the southward of Cape Orignal kept open to the northward of Basque Island, leads clear of the lighthouse ledge. With the lighthouse bearing S.W. by S., this ledge will be exactly between the ship and lighthouse.

Between the lighthouse and the West end of Green Island, in fine weather, you may stop tide in 20 or 25 fathoms, close to the North side of the island; but if the wind be fresh, the ground will be found too bad for holding, and too near the shore. During N.E. winds, small vessels may anchor between the S.W. reef and Cacona, in 4 fathoms; but it will be better to bear up for the Brandy Pots light, lest they be caught by adverse weather, &c.

RED ISLAND bears from the lighthouse of Green Island N.W. by W. $\frac{1}{2}$ W. nearly $5\frac{1}{2}$ miles. The eastern extremity of its extensive reef bears from the lighthouse nearly N.W. by N., and is cleared by the lighthouse and beacon on Green Island in one, bearing S.S.E. $\frac{1}{4}$ E. When coming up in the night, the light should not, therefore, be brought to the eastward of S. by E., until you are certainly within 5 miles of it. If, with the light bearing S. by E. you cannot make free to enter the Narrows, wait for daylight; and, should the wind be scant from N.W., you may then borrow on the South side of Red Island, but so as to have White Island open twice its own breadth from the North side of Hare Island. On drawing to the westward, you may approach the shoal of White Island by the lead, remembering that the ebb tide sets strongly down between White Island Shoal and Red Island, and the flood in the contrary direction. A vessel may anchor, in fine weather, on the South side of Red Island Reef, in 12 fathoms, at the distance of about three-quarters of a mile. The tide hereabout, as already shown, sets in all directions.

The SOUNDINGS between Green Island and Red Island are very irregular. At a mile from each are nearly 30 fathoms of water. The water of this channel, during ebb tide, with an easterly wind, appears broken, but there is no danger.

THE NORTH COAST.—The *Point de Mille Vaches* bears from Bicquette N. by W. $\frac{1}{2}$ leagues. The extensive shoal which surrounds this point commences off the river of *Port Neuf*, on the East. The southern extremity of the shoal is a mile from shore, and is very steep-to. The greater part of the shoal is dry at low water. Above the point the land forms the *Bay of Mille Vaches*, which is shoal, and full of rocks. At 11 miles S.W. by W. from Point Mille Vaches are two islets, called the *Esquemin Isles*. In the bay, at 4 miles West from the point is a small river, called *Sault au Mouton*, having a handsome fall of 80 ft. near the mouth of it, which may be always seen when passing. Between the Esquemin Isles and Saguenay River, a distance of $7\frac{1}{2}$ leagues, S.W. by W., are three small rocky islets, named *Bondesir* and *Les Bergeronnes*, which afford shelter to fishing boats.

In proceeding for the Saguenay River, should the weather be thick, it would be
G. & R. of St. Lawrence.

advisable to drop anchor at the Brandy Pots, until the weather becomes favourable, when the entrance can be easily effected with a leading wind. The leading marks are good, and the entrance a mile wide between the shoals. The Bull is a round mountain on the North side of the Saguenay, about 3 miles up, and by keeping the Bull open from the points, there is no danger in running in; and when abreast of the port or houses at Tadousac, they may run up on whatever side they think they have most advantage, but with ebb tide there is less current on the N.E. side of the river.

Other directions have been given in the description of the river on p. 125, and it may be added here that there are good anchorages at the Anse St. Etienne, 10 miles above Tadousac, at St. Louis Island, 15 miles from Tadousac, at the Anse St. Jean, 22 miles, and at the Baie de l'Eternité, 28 miles above Tadousac, at all of which vessels might lie well to load; in other parts of the river the depth is far too great to anchor.

Ships working up to the North side, between the Esquemin Isles and Red Island, should keep within 2 leagues of the North land; the shore is clear and bold, and the flood pretty regular.

Should a ship, to the northward of Red Island, be caught by a sudden shift of easterly wind, so that she cannot fetch round the East end of Red Island Reef, she may safely bear up and run to the westward, giving Red Island, White Island, and Hare Island, on the port side, a berth of 2 miles in passing. At 3 leagues above Hare Island haul to the southward, and enter the South channel toward Kamourasca; whence proceed as hereafter directed.

GREEN ISLAND TO THE BRANDY POTS.—The Percée Rocks, Barrett Ledge, White Island, and the Brandy Pots, have already been described. (See page 132.) From Green Island to the Brandy Pots lighthouse the course and distance are from S.W. $\frac{1}{2}$ W. to S.W. by W. 4 leagues. To sail to the northward of Barrett Ledge, the lighthouses on the Brandy Pots and Kamourasca will be good guides, but by day bring the southernmost mountain of Kamourasca in a line with the saddle of the Great Pilgrim, or an islet lying off the N.E. side of Green Island, touching the high land of Cape Arignole. Either of these marks will clear the Ledge.

In advancing toward the White Island Reef, you may trust to the lead; seven fathoms is near enough to tack or anchor in, and this depth is in the fairway to the Brandy Pots. The Brandy Pots are steep on the South side, 10 fathoms being near to them.

There is good anchorage to the eastward of the Brandy Pots, in from 9 to 7 fathoms, and good anchorage above them, in from 9 to 14 fathoms. This is the best roadstead of any part of the river, during easterly winds, excepting that of Crane Island, and is the usual rendezvous for vessels bound down the St. Lawrence, and waiting for a wind.

There is a good passage to the southward of Barrett Ledge up to the Pilgrims, leaving the *Middle Shoal*, which is above Barrett Ledge, on the starboard hand. The North passage is, however, the best and most used.

BRANDY POTS TO THE SOUTH TRAVERSE AND GOOSE ISLAND.—For the flat on the South side of Hare Island, above the Brandy Pots, see page 132. This flat is bold-to, there being 7 fathoms close to it, nearly up to the West end; and the whole of this side of the island is bound by rocks.

The lower end of the Middle Bank, as already noticed, page 135, bears S.E. $\frac{1}{2}$ E. about a mile and a half from the Brandy Pots. Between the Middle Ground and Hare Island are 10 and 16 to 20 fathoms of water. On the South side of the Middle Ground there are 8 and 9 fathoms; at half-tide, in this part of the river, a large ship may safely beat up or down.

In proceeding to the westward from the Brandy Pots, there is a 3-fathom rocky patch, and the knoll at the West end of Hare Island Bank to be avoided, the rocky patch being two-thirds of a mile eastward of the knoll which is to the S.E. of the western end of Hare Island; between them there are 3 $\frac{1}{2}$ and 4 fathoms. The marks and bearings of these have been described (page 132). The Middle Bank, which

extends between the Middle Shoal and Hare Island Bank, has $3\frac{1}{2}$ and 4 fathoms on it, and consequently this draught may be carried over it, but if a greater depth than $3\frac{1}{2}$ or 3 fathoms be wanted, White Island must be brought open to the eastward of the Brandy Pots. When White Island is brought to the westward of the Brandy Pots, or midway between them and Hare Island, the mark is directly on the 3-fathom patch, before described.

In standing to the southward from Hare Island, above the Brandy Pots, you will find 18 and 20 fathoms of water. On the North side of the Middle Bank, 4 fathoms; but there are 8 and 9 fathoms on the South side of this bank, with gradual soundings to the South shore. Five fathoms is a good depth to tack in. Abreast of the middle of Hare Island the depths are nearly the same.

The direct course from the Pilgrims to the chequered buoy on the South side of the Traverse is S.W. by W., the distance about $7\frac{1}{2}$ leagues. The South Traverse and coast between have been fully described, see page 133. The bank between the Pilgrims and Kamourasca Isles is steep-to. The mark for tacking here is not to shut the S.W. land with the great Island of Kamourasca—in standing to the northward, you will gain the depth of 20 fathoms.

KAMOURASCA.—From the West end of Crow Island, the third of the Kamourasca Isles, as described on page 132, the church bears S.E. nearly a mile. Between is a place on which ships may safely be run on shore. To get in, bring the church to bear E.S.E., or some distance to the westward of Crow Island, and run for it. In passing in, you will carry 14 feet in common spring-tides, and 10 feet with neaps. The bottom is of soft mud.

CAPE DIABLE bears from Crow Island S.W. $\frac{1}{2}$ W. about 3 miles, and a reef extends from the cape as already explained, the easternmost part of which is not more than a mile and a half from Crow Island. Ships from the westward, therefore, in order to get in, should run down along the reef in 6 fathoms, and haul in for the church, as above.

With easterly winds, the large cove on the S.E. of Cape Diable is a fine place for a vessel to run into, should she have lost her anchors. To enter, bring the church and Crow Island in the line of direction given above. Having arrived within the reefs, run up to the westward, leaving an islet that lies above the church on the left side; then put the ship on shore in the S.W. part of the cove, and she will be safe. Should the wind be westerly, put her on shore a little to the eastward of the church.

SOUTH TRAVERSE.—From Cape Diable to the *South Traverse*, the course, if at 3 miles from the cape, will be S.W. by W. In proceeding, keep the northernmost part of the high land of Kamourasca in a line with the low point of St. Denis; this mark will lead to the lightvessel and the black buoy off the point of St. Roque, and the white buoy upon the Middle Ground on the opposite side. When St. Roque church bears S.E. by S., the roadway beyond the church will be in a line with it, and you will be up to the buoys. From this spot run one-half or quarter of a mile above the buoys on a S.W. course.

From the spot last mentioned, the direct course upward along the edge of St. Roque's Bank will be S.W. $\frac{1}{2}$ S. 4 miles, and S.W. by S. 2 miles; but considerable allowance must be made for tide, whether ebb or flood. These courses lead up to abreast of the red buoy, lying on the bank at $4\frac{1}{2}$ miles W.S.W. $\frac{1}{2}$ W. from the Point of St. Roque. The depths on the courses prescribed are 8, 7, and 6 fathoms, varying to 11, and again to $5\frac{1}{2}$ and 6 fathoms.

On proceeding hence upward, with the lighthouse on the Stone Pillar in sight, bearing S.W., you will keep in the best water, but south-westward of the red buoy are several detached $2\frac{1}{2}$ and 3-fathom shoals, one of which, the Channel Patch, is in the fair-way; the bearings and marks are described on page 134. It may be passed to the northward or southward, until you have the Stone Pillar at the distance of 2 miles, where the depths at low water are 5 and 6 fathoms. From this you bear up, on a South course, into the southern part of the Traverse; and thence not forgetting the *Avignon*, or *South Rock*, the course will be S.W. $\frac{1}{2}$ W. until

past the Stone Pillar and Goose Island Reef, which you keep on board upon the star-board side.

If running from off Cape Diabie for the Traverse, during the night or in a fog, strike the bank off that cape in 7 or 8 fathoms, and steer about W.S.W. By keeping the water, it will lead to the lightvessel. On passing the point of St. Roque Sand, the water will suddenly be found to deepen, when you must haul to the southward keeping the South side on board, and proceeding as above.

If entering the Traverse with *little wind*, be careful to allow for the first of the flood, as it sets strongly towards the point of St. Roque Bank. On going through, if more than half-flood, allow for a set to S.W. by W., and be sure always to keep the South bank on board. Above the Pillars, the tide sets fair up the river.

In beating into and through this passage, be careful and tack from each side on the first shoal-cast of the lead; but most so to the northward, on the edge of the Middle Ground. Ten fathoms is near enough to the bank; and it is to be remembered that the ship will always go farther over toward the Middle Bank than to the point of St. Roque Shoal.

Anchorage.—Between the Brandy Pots and Traverse, there is anchorage all along the English Bank, and upon the edge of the flat on the South side, between the Pilgrims and the greater Kamourasca Isle, in 9 fathoms; under the Pilgrims in 3 fathoms; off Cape Diabie, in 10 fathoms; and thence, along the flat, up to the buoys.

Should the flood be done, when a ship is in the Narrows, or between the buoys, or if any occurrence render it necessary to anchor thereabout, instead of coming-to in the channel, run below either buoy, and come-to there, in 7 fathoms, on either side. The tides will be found much easier after half-ebb below the buoys than between them. In the deep water the tides here run very strong. Should the wind be inclinable to the southward, anchor to the southward of the stream of the black buoy, in 7 fathoms. Should a ship be a mile above the buoys, under similar circumstances, she should anchor on the edge of the South Bank, in 7 fathoms, with a good scope of cable before the tide comes strong; for, if the anchor once starts, you may have to cut from it, as it seldom takes hold again, the grounds hereabout being foul and unfit for holding.

Near the Pillars the tides are much easier than below; at and above them, setting at the rate of not more than $3\frac{1}{4}$ miles an hour.

Ships bound down with easterly winds may anchor at 2 miles to the north eastward of the South Pillar, in 7 fathoms; or, to the southward of it, in the same depth, with good ground.

Stone Pillar to Crane Island.—From abreast of the Stone Pillar, or of the Avignon Rock, the direct course and distance to Crane Island Lighthouse are S.W. $\frac{1}{2}$ W. 4 leagues. On this course you pass Goose Island, and arrive at the Beaujeu Bank, the channel to the South of which is that generally used; the depth in it is irregular, varying from 5 to 3 fathoms; and there are two rocky patches of $2\frac{1}{2}$ fathoms in the way, and difficult to avoid. The marks for passing the southern edge of the Beaujeu Bank, along the eastern half of its length, are, the Stone Pillar, its own breadth open to the southward of Goose Island Reef; and for the western part of the bank, which turns up slightly to the northward towards Crane Island, Point St. Vallier in one with the South side of Crane Island.

The South side of the channel is a muddy flat, of 3 and 2 fathoms, with regular soundings toward it. There is good anchorage all the way up to Crane Island. Stand no nearer toward Goose Island Reef than 10 fathoms; but above it you may stand toward the island to 7 fathoms.

When up to the lighthouse on Crane Island, you may approach safely, as it is bold and clear, with 7 fathoms close to the rocks.

ANCHORAGE.—From off the Pillars to Crane Island, there is all the way good and clean ground. There is, also, a good road off the body of Crane Island, in 8 fathoms. The best road in the river, during easterly winds, is at a mile to the westward of Crane Island; and ships bound downward, if at the Pillars, and caught by strong

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easterly winds, had better run back to this place than ride below, and risk the loss of anchors.

Crane Island to Point St. Vallier.—The direct course and distance from Crane Island to Point St. Vallier are from W. by S. to W.S.W. 4 leagues. Between are the mud bank of St. Thomas, the Wye Rocks, the Belle-Chasse Islets, and the bank of Grosse Island. (*For description, see page 136.*)

The Bank of St. Thomas is above 2 miles broad, and is dry at low water, nearly to its northern edge, which is very steep, and the marks for clearing it are Belle-Chasse Island and Point St. Vallier touching.

When St. Thomas's Church bears S.E. $\frac{1}{2}$ E., you will be abreast the point of the bank called Margaret's Tail, having a red buoy, and may thence steer directly up, W.S.W. The mark for the southern edge of Margaret's Tail Bank is, the S. side of Haystack Island and Crane Island Church in one, bearing E.N.E.

To avoid the Wye Rocks, never stand to the southward of six fathoms in the night; and by day, observe that the long mark is to keep Belle-Chasse Islets just open to the southward of Point St. Vallier. They are out of the way of vessels with a fair wind, and the cross mark for them is the Seminaire on the North shore in one with the East point of Reaux Island, and Crow Island just open to the westward of Middle Island.

To the West of Margaret's Tail is a narrow rocky shoal called Grosse Patch, with 7 feet least water; between this shoal and Margaret's Tail is a channel 270 fathoms wide, and 5 fathoms deep, leading to the Quarantine Establishment on the southern side of Grosse Island. For the guidance of the numerous vessels which stop there, a red buoy has been placed on the S.W. end of Margaret's Tail, as before mentioned, and also a white buoy on the N.E. of Grosse Patch; but in the absence of buoys, the East points of Grosse Island and the Brothers in one, bearing N. by E., will lead through. There is a passage to the West of Grosse Patch, between it and the island, but care must be taken to avoid a small rock, with 7 ft. least water, lying 180 fathoms off Grosse Island, and on which a black buoy has been placed.

When above Margaret Island, stand no farther to the northward than into 6 fathoms. Reaux or Rat Island and Madame are flat to the southward; 7 fathoms will be near enough to both. The South side of the channel, up to Belle-Chasse, is all bold; 8 fathoms are close to it, with 7, 8, 9, and 5 fathoms quite across. There is good clean anchoring ground, and easy tides, all the way.

When up to Belle-Chasse, stand no nearer to these islets than 8 fathoms, and to Madame than 6 fathoms. The shoal extending from Madame has already been noticed, p. 136.

The mark for clearing the southern side of Madame Bank, as well as the Grosse Island Tail and Patch, is Race Island kept just open to the southward of Margaret Island. The mark for the S.W. extreme, which is the point of the entrance of the North Traverse, is the North side of Reaux Island just open to the northward of Madame Island, bearing N.E. $\frac{1}{4}$ E., and St. Vallier Church bearing S. $\frac{1}{2}$ E. The cross mark for clearing it to the S.W. is, Berthier Church and the west-end of Belle-Chasse Island in one.

The NORTH CHANNEL and TRAVERSE and the MIDDLE TRAVERSE are but seldom used, and the description of them will be found on pp. 136, 137.

St. Vallier to Quebec.—From the Point of St. Vallier to that of St. Laurent, or St. Lawrence, in Orleans, the course and distance are from W.S.W. to S.W. by W. 9 $\frac{1}{2}$ miles. Both sides are bold; 10 fathoms in the fairway from Orleans, and 8 fathoms from the South shore. Ships may anchor toward the island, in from 16 to 10 fathoms.

The SHOAL OF BEAUMONT, described on page 136, is steep-to. Make short boards until you are above Point St. Lawrence, when you will be above it, and may safely stand to the southward into 10 fathoms.

From POINT ST. LAWRENCE to POINT LEVY, the course and distance are W. by N. 2 leagues. At a mile and a half westward from St. Lawrence's church in St

Patrick's Hole. (See page 139). Here in about 10 fathoms is the fair-way to tack from. The depth in the middle is 13 fathoms.

From off POINT LEVY TO QUEBEC, the course is W.S.W., and the distance about 2 miles. The shoals of Beauport, on the North side, may be easily avoided; in standing toward them, advance no nearer than in 10 fathoms, as they are steep-to, and are, in some parts, studded with rocks.

Ships arriving at Quebec, with flood tide and an easterly wind, should take in their canvas in time, and have cable ready, as the ground in the basin is not very good for holding, the water being deep, and the tides strong, particularly spring-tides.

If obliged to come-to in the middle, there will be found from 16 to 20 fathoms abreast of the town; but near the wharfs, or at 2 cables' lengths from them, is a depth of 11 fathoms; and here vessels are easily brought up; but, in the offing, 16 fathoms of cable will be required. On the Point Levy side is a depth of nearly 30 fathoms, and the tides are stronger here than near the wharfs. With the wind heavy from the eastward, the best riding will be above the wharfs, off the cove called Diamond Harbour, in the depth of 10 fathoms.

The BALLAST GROUND, or place appointed by law for heaving out the ballast in, is to the westward of two beacons fixed on the South shore, above Quebec. These beacons stand on the brow of a hill, above a cove called Charles Cove, and when in a line bear S.E.

QUEBEC HARBOUR may be considered as extending from off the river St. Charles up to the Chaudière River, a distance of 5 or 6 miles, which all through the navigable season is thickly occupied by vessels employed in the timber trade, for the most part lying alongside the numerous wharves and blocks for embarking lumber, and consequently out of the stream.

But sometimes the spring or fall fleet arrives to the amount of several hundred sail together; and then, before they have had time to take their places for loading, the river is so crowded with shipping, that it is difficult to find a clear berth. A gale of wind occurring under such circumstances, is sure to do damage, since the water is deep, the ground (sand and gravel) not good, the tide strong, and the vessels often carelessly anchored.

A great annoyance to vessels at anchor off Quebec are the large and heavy rafts of timber so frequently dropping down with the strong ebb-tide. These often get athwart hawse of vessels, and are almost certain to do them injury, either by forcing them from their anchorage or otherwise.

Docks.—For the repairs of vessels there are at present in the Harbour of Quebec four floating docks and five gridirons. The docks are capable of receiving vessels from 1,000 to 1,200 tons, and one of them will admit a vessel of 225 ft. keel, whatever may be her tonnage. One of the gridirons will receive ships of 1,800 tons. There is also a patent slip at Levi Point, opposite the city.

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